

Manabjamin

মানবজমিন

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**A DOSSIER OF
COVID-19 PANDEMIC**



**Government General Degree College
Singur, Hooghly**

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A Dossier of
Covid-19 Pandemic

Vol. 2
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A DOSSIER OF COVID-19 PANDEMIC



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Singur, Hooghly

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Editorial Note

On March 11 2020, WHO Director-General through his opening remarks in a media briefing on COVID – 19 officially ascertained what the World timorously anticipated - the novel Corona Virus can be characterized as a global pandemic with an alarming level of spread and severity. The declaration had the global population looking down an infinitely long barrel, standing at the cusp of a period of unprecedented turbulence. The gravity of the scenario was appraised to all nations with the grim caveat that it should not be taken carelessly, and clear warnings were issued about its ominous aftermath. The disease, as it was, initiated from the city of Wuhan, China and later spread to South Korea, the United States and Europe, presenting unforeseen challenges to these developed nations. A response was inevitable, and furthermore, the World was bearing witness. Quite expectedly, they pulled in their resources together, altering their means to recover from the aftermath of this severe pandemic and its effects on the lives of their citizens alongside. Many underdeveloped and developing nations like India, yet uncertain of the fate of COVID – 19 in their territories, took recourse to extreme measures like announcement of complete lockdown after February.

The Government of India announced a complete lockdown within the country for 21 days with effect from 24 March 2020, which continued till 31 May 2020. Being the second highest populated country in the world, India witnessed the strongest measure of complete lockdown in the World, where only essential services were open through this critical phase. Thereafter, economy was opened up in a phased manner from June 2020.

Even after the measures were loosened, the world seemed different and the challenges in the lives of individuals were new. Economies of many nations saw decline in growth rates, unemployment due to job losses grew, salary downgrades became common, and labour migration, the images of which were globally disseminated through media networks, presented new humanitarian crises. Individual well-being and economic health of nations dipped to new lows despite desperate attempts to claw out of them throughout the first half of the year 2020. The only ray of hope was expected from the researchers across nations to invent a vaccine which could cure human lives of this severe pandemic. Horrid memories of the Spanish Flu from a century

ago haunted the public imagination. This backdrop of pandemic initiated research across the world, and compelled publications on the area of COVID-19 and its impact on the economic slowdown, financial markets, wellbeing, COVID-19 Vaccine, measures to safeguard the human beings from COVID-19. Social media, which provided diverse communication channels to people, also provided impetus to the qualitative research in this year 2020. By December, news of some successful vaccines with a success rate between 70 percent and 95 percent from countries like Russia, UK, USA began to pour in, and the process of immunization gave the world an opportunity to heave a sigh of relief. India with its expanse and steep population undertook the largest vaccination project in the world, and all are eagerly for it to script a success story.

These developments notwithstanding, the trouble is far from over. New waves of the COVID-19 pandemic continue to strike, worldwide, leaving people wondering about how to return to what was once accepted as 'normal' and speculating what the lasting effects of a year of restrictions, lockdowns and uncertainty will be.

In the early phase of the pandemic, scholarly journals and their publishers created *fast-track* systems for COVID-19 related content, enabling quick review and avoiding unnecessary publication delay. In evaluating scholarly manuscripts dealing with content related to COVID-19, journal editors, peer reviewers, and readers alike softened their stances, toned down their opinions, reframed quality criteria and learnt to be content with a compromised standard of excellence. In particular, they seemed to ask for fewer additional experiments, expressed satisfaction with smaller samples, and suggested altered strategies to qualify claims too strong.

Authors were not, for example, asked to remove, extend or improve poor quality data, but rather encouraged to merely state this as a limitation, or even as a conclusion to their studies. In a broader sense, review criteria shifted from prioritising novelty towards foregrounding a focus on clinical or societal relevance.

Lockdown and social distancing measures due to the COVID-19 pandemic led to a closure of schools, training institutes and higher education facilities in most countries. This resulted in a paradigm shift in the way educators delivered quality education by positing a wide array of online platforms at the centre of educational activities. Online learning, distance and continuing education were considered the panacea to this unprecedented global crisis, the challenges it posed to both educators and the learners notwithstanding. The education system and the educators adopted "Education in Emergency" through various online platforms and accepted a system that they were not earlier prepared for out of compulsion. Yet, it was universally agreed that transitioning from traditional face-to-face learning to virtual learning can be an entirely different experience for the learners and the educators, to which they must adapt with little alternatives available. We learnt that e-learning tools can play a crucial role, helping schools, colleges and universities to facilitate learning following the closure of campuses. We also came to realise that there is no one-size-fits-all pedagogy for online learning. Subjects come with their varying needs. Different subjects and age groups require different approaches to online learning.

As schools and colleges have been closed to cope with the global pandemic, students, parents and educators across the globe are continuing to feel the unexpected ripple effect of the COVID-19 pandemic. While

governments, frontline workers and health officials are doing their best slowing down the outbreak, education systems are trying to continue imparting quality education for all during these difficult times, albeit the fact that many students at home/living spaces have undergone psychological and emotional distress and have been unable to engage productively. The best practices for online homeschooling are yet to be explored. Internet bandwidth is relatively low with lesser access points, and data packages are expensive and beyond the reach of many in most developing countries, making accessibility and affordability inadequate. The lesson learnt from the COVID-19 pandemic is that teachers and students/learners should be oriented on the use of different online educational tools. When the normal classes resume after the COVID-19 pandemic, teachers and learners should be encouraged to continue using such online tools to enhance teaching and learning.

Government General Degree College, Singur is a new college in the Higher Education arena of West Bengal, being the third General Degree College in the District of Hooghly where two Institutions with illustrious histories already exist, including one that started its journey before Independence. In the first few years after its establishment in 2013, our college, popularly known as Singur Government College, is developing fast to keep the proud flag of the Government Institutions aloft. Students admitted here are passing with flying colours, teachers are consistently producing high impact publications and the College is developing its resources every day.

It will be a gross misstatement of facts to state that the college stayed immune to the pandemic. It was as deeply affected as any other institution, but the silver lining is that both the students and the teachers reacted well to this “Education

in Emergency” situation. Google based online classes were organized successfully, online examinations were conducted and programmes like academic webinars involving scholars from different parts of the country were organized regularly. Awareness programmes through NSS and cultural programmes continued to be organized.

In the long-term interests of recording history for future generations, we decided to prepare a collective archive that would provide contemporary and individual insights into how people coped (or failed to do so) with the social distancing measures imposed on society, the illness itself as well as its repercussions such as reduced or terminated employment and access to friends and families. The archive will, we believe, provide a wealth of material from which one might build exhibitions in the coming years that will allow the current generation to reflect on and contextualise their experiences when we emerge from the health emergency. With this goal, the teachers of Government General Degree College, Singur is publishing a new volume of *Manabjain*, a knowledge based volume once published earlier with some scholarly notes, but this time dedicated to the purpose of understanding the pandemic through its multifarious aspects.

As with any other endeavour especially in this lockdown period, the preparation took a longer period to complete the reviewing, proof reading and publication processes. Though the publication was scheduled to be published in 2020, it will finally see the light of day in 2021. Meanwhile, lots have changed in the pandemic situation. Vaccines are in vogue, drugs are available but the threat of the pandemic still persists as we brace ourselves for the third wave of the Covid-19 infection. Many of the papers published in this volume may be

thus marginally anachronistic, but we have nevertheless continued our endeavour to record our observations up to 2020, the first ever wave of this pandemic. We will definitely come up with more information on current scenario later, but this volume is dedicated to that period of astonishment that we faced in the first wave of the pandemic, the unpreparedness and helplessness in our societies and governance to deal with the emergent situations.

On behalf of the Printing and Publication Committee of this College, I would first like to thank all the teachers of this College for their active participation in this endeavour. I specially thank the IQAC Co-ordinator of this College, Dr. Chaitali Chaudhuri and the Secretary to the Teachers' Council, Sri Samit Bhanja. I would also like to express my gratitude to Dr. Arindam Goswami, Head, Department of Bengali and Dr. Arikta Chatterjee, Head, Department of English for their constant encouragement and support.

The Joint Conveners of the Printing and Publication Committee, Dr. Parama

Basu and Dr. Soumya Kumar Misra, along with the other members of the Committee, viz. Dr. Md. Kutubuddin Molla, Dr. Munmun Ghosh, Sri Jamadar Kisku, Sri Koushik Das and Smt. Samprikta Pal are thankfully acknowledged for their constant enthusiasm and dedicated efforts to bring out this publication during the pandemic. I also thank Mr. Bibhas Dutta of Arunima Printers helped in making the project see the light of day.

My sincere gratitude to all honourable Peer Reviewers who, though not connected with the college, took time out of their busy schedules and graciously offered to support us with their valuable comments, suggestions and serious reviewing of the manuscripts.

Last but not the least, I extend my best wishes to the students of our college who helped inspire us to cling on to hope even in this dark period by displaying a rare strength of resilience against adversity, and it is to them that I would like to dedicate this second volume of Manabjain.

December, 2020

Dr. Santanu Chakrabarti

Principal

Government General Degree College, Singur

Chief Editor

Contents

The Eternal Conflict between Being and Non-Being: Story of a Species' Quest for Life during the Pandemic ABANTI BHATTACHARYA	1
Towards an Ethnography of Mass Media Discourses on COVID-19 ABHRADIP BANERJEE	11
COVID-19 and Pseudoscience: An Infodemic in the Time of Pandemic ADITI JANA	28
COVID-19 Pandemic and Lockdown: Staring Eyes from Rural Areas in India ALOKESH HAZARI	34
All Hopes to Muzzle a Modern Malady Pinned on Familiar Fixes AMRIT KRISHNA MITRA	36
A Review on how Artificial Intelligence Played a Critical Role in this Pandemic (COVID-19) ANUPAM SEN	45
Together at Home Concert: An Analysis of Home and the World as Performance Spaces in the Time of Worldwide Covid 19 Pandemic ARIKTAM CHATTERJEE	56
Effects of COVID-19 and Lockdown on the Teaching-Learning Sphere: A Brief Account on the UG Level BINITA BASU AND SRIJA MANDAL	68

COVID-19 and History Writing: A Paradigm Shift? CHAITALI CHAUDHURI.....	75
Locked In and Down: A Study on Mental Health of Young Students CHANDRIMA BISWAS	82
The Search of Safe Protein Source during the Pandemic of Covid Corona Virus DEBAJYOTI CHAKRABARTY.....	93
Changing Nature of Multitasking : A Look through Urban Working Womens' Chores during COVID 19 Pandemic GARGI MUKHOPADHYAY	96
Fight Corona with Friendly Flavones JAYSHREE SADHUKHAN	99
COVID – 19: Despair and Hope (Migrant Crisis) JOYDEEP SEN	104
Covid-19 – An Enigma of 21 st Century KAMALA GUPTA AND BHASKAR GUPTA	108
Dystopian Musings, Hyperstition and the Twisted Narratives of a Global Pandemic KALLOL ROY	118
Food for Thought: The Changing Culinary Landscape in the Times of Corona Pandemic PARAMA BASU	133
Perceiving 'Safe'-Ty during 'Stay Home': An Anthropological Account PARAMITA SEN.....	140
Problem of Evil and Idea of Life: A Philosophical Investigation during the Lockdown Days SAIKAT BANDYAPADHYAY	155
On the Immunity and Vaccination of Coronavirus Infection with Special Reference to COVID-19 SAIKAT SARKAR.....	163

Work/Play/React from Home during the Pandemic: Labour and Leisure in My Cup of Tv's Reaction Video to BTS's Music Video "Life Goes On"	
SAMPRIKTA PAL	170
The Dark Future of Digital World	
SANDIPAN BASU, SAMIT BHANJA AND ANUPAM SEN	176
Basis of CT Scan Imaging in Covid-19 Infection Detection	
SANDIP MITRA	178
From Images of Object to Object-in-Images: A Semiotic Appraisal of Covid-19 in Visual Culture	
SAYANTAN BOSE	183
Searching for the New Pasteur: Politics with Covid Pandemic Remedies	
SAYANTANI NATH AND KAUSHIK DAS.....	192
Polyphenols from Indian Medicinal Plants: Plausible Resource of Drug Discovery against nCOVID19	
SELIMA KHATUN.....	201
Emergence of a D614G Mutation in the Spike Protein of 2019 Novel Coronavirus, a Trojan Horse	
SUBHANKAR MUKHERJEE	205
Impact of Covid 19 Disaster and Lockdown Period on Family Relations:	
SUMANA GOSWAMI	211
Recommended Laboratory Methods Currently Applied to Test SARS-CoV-2 in COVID-19	
SUPRATIM MUKHERJEE.....	221
Effects of Covid-19 Pandemic on Global Environment and Proposed Remedies	
SUSANTA NATH.....	239
Anxiety of Death and Search for Meaning and Authenticity in Social Isolation:	
SUSMITA BHATTACHARYA AND SREEPARNA KAR	251

Theory of Causality and Corona Virus: A Study from Indian Philosophical Traditions	
SUTAPA MONDAL.....	261
The Social Pathogen: A Sociological Analysis	
TITASHA SINHA	267
Pricing of Cloud Resources: Some Key Factors	
SANDIPAN BASU.....	272
আমার গৃহবন্দী জীবন	
অরিন্দম গোস্বামী	275
করোনা টিজু আর আদিবাসী আরিচালি	
জামাদার কিস্কু	281
করোনার কবলে	
মহঃ কুতুবুদ্দিন মোল্লা	284
বিষয় করোনা : সাম্প্রতিক কবিতার বয়ানে	
নবনীতা বসু.....	288
কোয়ারেন্টিন – কোভিড 19 ও বাংলা কথাসাহিত্য	
মুনমুন ঘোষ.....	301
করোনা আক্রান্ত সমাজ : বিধ্বস্ত আমরা	
সংহিতা সিন্হা	310
মারির ইতিবৃত্তঃ নির্বাচিত বাংলা ও সংস্কৃত সাহিত্যের নিরিখে	
সৌম্য কুমার মিশ্র	315

The Eternal Conflict between Being and Non-Being: Story of a Species' Quest for Life during the Pandemic

Abanti Bhattacharya

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I

Introduction : How a Pandemic Can Alter the Course of Human History?

Thou shalt not be afraid for the terror by night;
nor for the arrow that flieth by day;
Nor for the pestilence that walketh in darkness;
nor for the destruction that wasteth at noonday.
A thousand shall fall at thy side, and ten
thousand at thy right hand;
but it shall not come nigh thee

.....

There shall no evil befall thee, neither shall any
plague come nigh thy dwelling.
For he shall give his angels charge over thee, to
keep thee in all thy ways.

**- The Bible, King James Version, Psalm
91:5-11**

The above-quoted biblical expression postulates the idea of a corporal punishment of entire humanity by a hostile divine entity. It is also historically significant because it became the great plague text that was read out from Christian pulpits across Europe during various epidemic visitations of 16th and 17th century. The idea encrypted in the above passage is that if the human,

renounces sin and believes in the luminous presence of a transcendental divine being, there will be no affliction and fear of plague or any other disease. In this post-pandemic wilderness of disbelief and distrust, I am not really sure whether an all-powerful divine entity will suddenly emerge from the blue empyrean to save our present humanity from the impending catastrophe. But one thing is for sure that the Post-Pandemic world order can be different and challenging. And this is not new. History has always taught us that epidemics have the potential to change the course of human civilization. From this point, I want to raise a question and begin this article: how and to what extent a pandemic can alter the course of human history?

Epidemic outbreaks have re-shaped our human society, disrupted life, halted revolutions, defeated armies and also have affected the inter-personal relationships, human subjectivity, the creations of artists and intellectuals, the man-made environments. But most importantly, these epidemic outbreaks have also created new social structures, transformed existing state machineries, sharpened political and social class divisions, and aggravated social

antagonisms. There are plenty of examples from the pages of history: when cholera struck Paris in 1832, an epidemic that would eventually kill nearly 19,000 Parisians - a conspiracy theory spread that the unpopular government under King Louis Philippe was poisoning wells with arsenic. The police and army were barely able to contain the violence that ensued. Similarly, Napoleon Bonaparte's nineteenth-century imperial expansion west-wards across the Atlantic Ocean was halted by yellow fever¹, which his army encountered in France's Caribbean colony of Saint-Domingue (now Haiti). The Black Death (1346-1353) changed the course of Europe's history. Some rough estimates suggest that it wiped out over half of Europe's population. It was caused by a strain of the bacterium *Yersinia pestis* that is likely extinct today and was spread by fleas on infected rodents. The bodies of victims were buried in mass graves. The Black Death's last major outbreak in Great Britain caused the Great Plague of London (1665-1666). By the time the plague ended, about 100,000 people, including 15% of the population of London, had died. In this context, an important passage from the newly-published book titled, *Epidemics and Society: From the Black Death to the Present* by Frank M. Snowden (2019) can be cited:

[...] epidemic diseases are not random events that afflict societies capriciously and without warning. On the contrary, every society produces its own specific vulnerabilities. To study them is to understand that society's structure, its standard of living, and its political priorities. Epidemic diseases, in that sense, have always been signifiers, and the challenge of medical history is to decipher the meanings embedded in them. (Snowden, 2019, p. 7)

All over the world, after the aftermath

of any epidemic, popular reactions were dominated by panic, fear of contamination, and anger. Rebellions and destruction of property took place throughout the history of epidemic/pandemic outbreaks. Plague also led to the first (often draconian) strategies of public health to combat epidemic disaster. These strategies included the establishment of boards of health with almost unlimited powers during emergencies, quarantine and the forced confinement of sufferers, lines of troops and naval blockades known as sanitary cordons intended to isolate entire cities or even countries, and pest-houses opened to admit the sick and the dying.

Another danger for an obscure disease which is amazingly infectious, is the uncertainty till an effective vaccine/medicine develops. Particularly along these lines, when it spreads so quick across the world. It serves as a pervasive reminder of our 'end', which can be terribly disturbing. *The Plague* (1947), which is a novel by Albert Camus, that tells the story from the point of view of a narrator of a plague sweeping the French Algerian city of Oran describes such a predicament. The inevitability of human sufferings through illnesses often comes as an abrupt realization provoking panic and fear among the masses. This intense 'fear of end' while knowing the very obvious has been the basis of human absurdity during the time of pandemics. Existentialism further proposes this absurdity to rise out of the conflict between constant search for meaning in life versus the apparent 'nothingness' of the universe.

Thus, throughout the human history at the time of the outbreak of a highly contagious epidemic - be it mumps, measles, smallpox, polio or plague - blame-gaming and victim-hunting become part and parcel of human social behaviour. Snowden (2019) in his book *Epidemics and Society: From the Black Death to the Present* quite appropriately writes:

Another distinguishing feature of plague is the terror it generated. Communities afflicted with plague responded with mass hysteria, violence, and religious revivals as people sought to assuage an angry god. They also looked anxiously within their midst to find the guilty parties responsible for so terrible a disaster. For people who regarded the disease as divine retribution, those responsible were sinners. Plague thus repeatedly gave rise to scapegoating and witch-hunting. Alternatively, for those inclined to the demonic interpretation of disease, those responsible were the agents of a homicidal human conspiracy. Frequently, vigilantes hunted down foreigners and Jews and sought out witches and poisoners. (Snowden, 2019, p. 29, my italics)

Hence, any pandemic/epidemic magnifies the already existing economic, demographic, and social fissures. COVID-19 Pandemic is not an exception. The plagues of Europe in Medieval and Renaissance Period left in its wake vast numbers of orphans, widows, and destitute families. In the same way, the outbreak of corona virus disease, in 2019 for the first time, we have stumbled upon on an already known term called “migrant labourers”, a crowd of “disenfranchised invisible citizens” (*The Hindu* of 31st May, 2020) of our own country. Now, we have been informed that more than 450 million Indians (37%) are internal migrants who change their residence within a country’s national borders. About 30% of the migrants are youth aged 15-29 years and another 15 million are children. Though these information were already there in Census Report of India, 2011 (*The Hindu* of 31st May, 2020)².

In the next section of my article, I will try to explore the discourse of epidemiology, the distinction between epidemic/pandemic and endemic in the light of some important theoretical frameworks.

II

Inscribing the Extraordinary: Epidemiology, Emergency and the State of Exception

An epidemic demands a response, which almost certainly entails the suspension of rules because of the highly infectious nature of the pandemic itself. Machineries of social isolation like quarantine centres becomes important for the prevention of the disease and the apparatus of epidemiology surveillance holds open the possibility that at any moment such measures may be required. In his new article “The State of Exception Provoked by an Unmotivated Emergency” (2020) Agamben refers to “social distancing” as a new kind of social order: “the current health emergency can be considered as the laboratory in which the new political and social devices that await humanity are prepared”³. Just like riot laws and anti-terrorism measures, public health laws inscribe the extraordinary procedures to follow when diseases (or rather, diseased persons) get out of hand.

Quite distinct from the popular understanding of epidemic as the scene of vast bodily destruction, scientists use the term “epidemic” basically to refer to a hypothetical state of exception where a hypothesized idea of “normalcy” has completely been jeopardized. The declaration of an epidemic usually requires a good understanding of a baseline rate of incidence⁴; epidemics for certain diseases, such as influenza, are defined as reaching some defined increase in incidence above

this baseline. A few cases of a very rare disease may be classified as an epidemic, while many cases of a common disease (such as the common cold) would not. And here lies the very difference between the concept of epidemic and endemic diseases. In epidemiology, an infection is said to be endemic in a population when that infection is constantly maintained at a baseline level in a specific geographic area without external inputs. But this difference between epidemic and endemic is highly relative depending on geography, demography and situation. For example, chickenpox is endemic (steady state) in the UK, but malaria is not. The very idea of “baseline” or “normality” is hypothetical because the proposed norm might have been incorrect, that is, there may have always been many cases of a disease, but unrecognized or beyond the boundary of pathological testing. The declaration of an epidemic makes that hypothetical norm “real” because until an epidemic is declared over, there can be no reassessment of the actual “normal/abnormal” presence of disease in the bodies of masses. Thus, from the moment an epidemic is declared, until it is over, the hypothesized “State of Exception” becomes the “New Normal”.

Agamben, basing his work partly on Foucault, by contrast, writes about the way Covid-19 has enabled the tendency to use a state of exception as a normal paradigm for government. He argues:

Faced with the frenetic, irrational and entirely unfounded emergency measures adopted against an alleged epidemic of [...] corona virus why do the media and the authorities do their utmost to spread a state of panic, thus provoking an authentic state of exception with serious

limitations on movement and a suspension of daily life in entire regions? (Agamben, 2020)⁵

Some critics find Agamben’s (2020) suggestion that the measures taken were imposing an “authentic state of exception” and that the “invention of an epidemic offered the ideal pretext” for further limitations to basic freedoms too paranoid and far-fetched. *The European Journal of Psychoanalysis* provides a dialogue called “Coronavirus and philosophers” that includes Foucault on “Plague towns” and “Panopticism” as well as the brief reflection by Agamben with responses by J.L. Nancy, R. Esposito, S. Benvenuto, D. Dwivedi, S. Mohan, R. Ronchi, and M. de Carolis⁶. In sum, Agamben draws attention to various issues that indicate a global crisis in democracy. Almost an identical line of thought has been propounded by another famous political scientist from this part of the continent, Ranabir Samaddar, in his newly edited book, *Borders of An Epidemic: Covid-19 and Migrant Workers* (2020).

Agamben’s presuppositions allude to Foucault’s notion of the self as constructed in relations of power, as already reflected in the new technologies of subjectification, namely social distancing, face-masks and self-isolation. The desire for safety creates even greater dangers that are internalized as freedom and perpetuated by fear.

From the topic of the craving for security and internalized sense of fear, I will now move into the third section of my article where I will discuss the fear of death bordering on existential crisis during the time of pandemic. In this section I will try to problematize social scenario of the COVID-19 in India through the lens of psychology.

III

Fear of the Unknown: Intrusion of the Anxiety of Death and Incidents of Violence

We can clearly see that during the time of Corona pandemic people are getting restless for being unable to groom themselves properly due to lockdown. They are complaining about their inability to go to the salon or parlour. They are complaining of looking “jungli” or primitive and untidy, and that just means being dirty in the superficial external physical appearance. But are we not actually becoming the one internally during this pandemic? Everyone is wearing a mask as a preventive measure to protect from the Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2), but have we not unmasked ourselves by revealing our primordial instincts in times of threat when we become vulnerable during this pandemic? Few experiences of the last two-three months of lockdown, because of the COVID-19 pandemic, made us realize and delve deep regarding this matter.

Since times immemorial, it has been seen that animals either take “fight” or “flight” reaction in response to threat, to protect themselves from the attacks of predators. This might be true today as well, when we are fighting with an unknown enemy, the novel corona virus. This fear of unknown might lead us either to protect ourselves by abiding by all the restrictions, imposed by the respective state and central governments or else we might feel vulnerable in facing this invisible enemy.

We have found repeated news of health workers and doctors, being attacked by Covid-positive patients, quarantined relatives and their acquaintances. In the initial phase of this pandemic attack, we have also encountered news like COVID positive patient has fled from the hospital

in Jabalpur (*The Indian Express*, 19th April, 2020). In Indore, when health workers went to do tests of the quarantined relatives and other acquaintances of the patient, unruly mob attacked them with stones and injured two of the female doctors in a five member group⁷. Not only this news, it was further reported that health workers, doctors and even police were badly beaten and injured in different parts of India. When doctors and health staffs are trying to help them, why the mob is trying to hurt them? Why the similar trend is being observed everywhere? The reason can be interpreted from multifaceted angles. On conscious level, most of the people are unaware, and have never heard of the virus before this pandemic. Since this is novel to them, people are not sure about the consequence of the disease, mode of treatment, outcome of treatment. They might be torn with the thoughts such as dearth of medicines and medical infrastructure will eventually result in their untimely death. Or, the thoughts of their family and loved ones might lead them to resent against establishment. Of course the associated stigma and taboo which are connected with the fear increases its impact manifold. In deep down there is fear of “unknown”⁸. We tend to fear those things about which we have minimum or no idea, be it death or any unknown virus. Here in this context, this unknown virus is linked with the fear of death.

In this context, we must mention the correspondence between Freud and Einstein in 1933, regarding war and peace, later published in book form as “Why War?” The correspondence between Einstein and Freud, deserves attention as a document in the history of ideas, particularly of the long search for the place of war in human affairs. In his letter, Einstein invites Freud to discuss “a question that seems to me the most important problem civilization has to

face: is there a way of delivering mankind from the menace of war?" (MacQueen, 1996, 8). Freud answers:

Conflicts of interest between man and man are resolved, in principle, by the recourse to violence. It is the same in the animal kingdom, from which man cannot claim exclusion; nevertheless, men are also prone to conflicts of opinion, touching, on occasion, the loftiest peaks of abstract thought, which seem to call for settlement by quite another method. This refinement is, however, a late development. (MacQueen 1996, p. 10)

The majority of the population, which can only lose from war, Einstein continues, is induced to support war by the political elites' control of the press, schools, and generally also of religious institutions. But, he asks, how is it that people are persuaded to support war? He can see only one answer: "A need to hate and to destroy exists in mankind. In ordinary times, this disposition is latent, and then appears only in abnormal individuals; but it is a comparatively easy task to wake it and raise it to a mass psychosis" (MacQueen, 1996, p.18). As early as 1915, Freud had published an essay on war and death, a closely argued psychological and cultural analysis that interpreted the conflict as symptomatic of severe psychic weaknesses in humanity, which society and culture had not been able to ameliorate. Echoes of this paper were to reverberate through his subsequent dialogue with Einstein. Psychoanalysis, he writes, has developed the hypothesis that human drives are of only two kinds: those that seek to preserve and unite and those that seek to destroy and kill. The former are called erotic, in the sense in which Plato uses the word "Eros" in the *Symposium*, or sexual, in deliberate expansion of the popular

conception of sexuality; the latter are called aggressive or destructive. Freud minimizes this duality as little more than a "theoretical clarification of the ... familiar opposition between love and hate", an opposition, he jokes, that may be "related to the polarity of attraction and repulsion" in Einstein's "field of knowledge" (MacQueen, 1996, p. 10).

People have a tendency to affirm their existence, despite the fact that tremendous amount of anguish is involved with the very idea of existence. But, existence indicates possibility of non-being as well. Death is the most obvious one. Hostility and physical illness can pose threats to being (Nelson-Jones, 2003). One of the severe existential crises is death and the fear of solitude. Because people have no clear idea about death, it is a mystery. In the same manner, people don't have much idea about the novel corona virus - how it behaves, how it is changing its structure every day. But they have some idea about the impact it has on human race. Death brings loss of loved ones. Both the processes - death and social isolation, lead us to two forms of solitude. One is temporary and the other is eternal. Both of them are in a way associated. Here, the pandemic is creating such isolation, which may lead to inter-personal isolation.

Death is a primary source of anxiety. It is not always in the realm of conscious awareness until we experience it (may be vicariously - fear of loved one's death or by suffering of self or others). Death concern or death terror is inevitable. This fear of ceasing to be can both be at conscious and unconscious level. It might be there in our consciousness, after a certain age when people experience the loss of their friends and spouse of similar age, they become conscious of it and then it comes clearly in the realm of consciousness. Strong fear is likely to be repressed up to a certain age. People are unaware of the inevitability of

death but everyone has the wish to continue to live. Here lies the eternal conflict between being and non-being.

Since we are bombarded with information of people dying and suffering all over the world, thoughts about death are haunting us. Somehow we start relate that to ourselves. This confrontation between fear of death (death anxiety) and fear of unknown lead us to take primitive “fight” or “flight” action. This might be the reason why many persons perceive the health workers as threat (they are here to take me to that unknown world). As a result they attack them and escape.

Many people are seen chit-chatting and loitering around here and there (not the needy people *per se* or not under any pressure). They are still in the hangover that this won't affect him/her. S/he might be in a state of denial. But few of them are persons who attack the health care staff. Few people even try to escape from the hospitals or quarantine centres. At times they stigmatize the patient and their family members as well. Their behavior may be the result of becoming the victim of that stigma itself. Death drive generally works during this time. It is the fear to go back to the inorganic state. In order to deal with that fear people tend to become more vulnerable. People become scared watching their impending death; start using denial as a defense. Constant exposure to the news related to the death poses a threat to their sense of being. As a result to cope, they turn into denial.

People use “fight” or “flight” in response to threat. This threat sets in when situation puts a bewildering question mark on that person's chance of “survival”. Here, I would like to share my personal experience, where a person, dressed “properly” (?), was searching for food. Suddenly he came closer and started searching for food in the piled up dustbins on the street. As a member of

“civilized” society we cannot think about that and as a result, when this happened in front of me, I could not believe my eyes and tried to rationalize it. So this is an example where we can see how this fear of survival can turn people “uncivilized” and primitive as well. Fear of uncertainty regarding future (anxiety regarding survival, life and profession) can make things more dark and bleak.

Now let us move into the concluding section of the article, where I will discuss about the value of the minimal in our post-pandemic life. I will try to explore the fact that whether the external events associated with the pandemic has the potential to change us internally, shifting our desire from the dream of a luxurious life towards the fundamentals of life.

IV

Value of Minimal: Restriction of our Demands and a Journey towards the Fundamentals of Life

There is also a huge change in our behaviour. And this change is not always due to internal factors but caused by the pandemic itself. We have also consciously restricted our demand, keeping it in consonance with the pandemic situation. We have become satisfied with less. People started knowing the value of minimalism. People have shifted from their luxurious life to simple living. But it made us realize that we are capable of living a humble and modest life. In this context, it will be appropriate to talk about the Slovenian philosopher, Slavoj Žižek who in his recent book, *Pandemic! Covid-19 shakes the world* (2020) categorically said that the pandemic reveals the virus of capitalism. The current crisis is a call to free ourselves from the tyranny of the market. Governments are

suddenly engaging in what looks like a major attack on capitalism with state sponsored employment for millions of people and a world-wide suspension of consumerism. Hence, after this pandemic he sees an opportunity for the reinvention of communism, in the form of solidarity. According to him, the desire for survival will create new bonds of solidarity:

...the present crisis demonstrates clearly how global solidarity and cooperation is in the interest of the survival of all and each of us, how it is the only rational egotist thing to do.

This period of pandemic becomes very important for those people who have re-discovered their own hidden talents during the lockdown. We have started realizing there is so much in our repertoire, which comes out in times of threat, when there is question of survival. When people start understanding the finiteness of life, they resort to personal growth, by doing something productive and constructive. According to Victor Frankl (1975, p. 125), "being human means being reasonable for fulfilling the meaning potential inherent in a given life situation". Sometimes Death gives it meaning to life. People's responsibility comes from the finiteness. And this in turn makes social contact with people. Many of the people are extremely resilient even after facing such adversities. The loneliness, a gift of the pandemic (?), lends people ample time to try out their hidden resources.

Before ending this paper, I will once again go back to the Renaissance, that fervent period of European history that has witnessed unparalleled ups and downs: tremendous progress in the fields of science, technology and medicine; but at the same time it is plagued with some of the greatest epidemics of the human history: epidemics of Florence (1430, 1437-38, 1449-50, 1478-79,

and 1527-31), London Plague of 1592-1593 and countless others. But still, it is the age of rebirth; it is the age that has produced *David* (Michelangelo), that muscular Greek athlete who symbolizes Renaissance's quest for strength and vitality. There is strange co-existence of life and death in Renaissance culture.

I will conclude this paper with the song of vitality, growth, positivity and life over decay, negativity and death even in the midst of this pandemic. People still hope to see a new world. "Eros" or life instinct⁹ might propel us to be resilient, to be more productive even in times of such adversities. "Life instinct" gives us "hope" to live a more constructive life and as a result we still believe that soon we will see the smiling faces of the people, not their masked identities.

Notes and References:

1. It is a viral disease of typically short duration, caused by the bite of an infected female mosquito. The World Health Organization estimates there are 200,000 cases of yellow fever worldwide each year, resulting in 30,000 deaths. Yellow fever appears to be on the rise internationally, due to a decreased immunity to infection among local populations, deforestation, climate change, and high-density urbanization. Please see for further information, Michael Oldstone, (2009), *Viruses, Plagues, and History: Past, Present and Future*. Oxford University Press, 102-4.
2. Please see for further information *The Hindu* of 31st May, 2020: <https://tinyurl.com/y7gljgxx>.
3. Please See Agamben, G. (2020), *The State of Exception Provoked by an Unmotivated Emergency*, *Positions Politics*. <http://positionswebsite.org/giorgio-agamben-the-state-of-exception-provoked-by-an-unmotivated-emergency/>. Accessed 6 June, 2020.
4. In epidemiology incidence is a measure of the probability of occurrence of a given medical condition in a population within a specified

period of time. Although sometimes loosely expressed simply as the number of new cases during some time period, it is better expressed as a proportion or a rate with a denominator. Please see "INCIDENCE – Epidemiology" entry in Encyclopaedia Britannica: <https://www.britannica.com/science/incidence-epidemiology>.

5. Agamben, G. (2020a). The invention of an epidemic. *The European Journal of Psychoanalysis*. <https://www.journal-psychoanalysis.eu/coronavirus-and-philosophers/>. Accessed 6 June, 2020.
6. Foucault, M., Agamben, G., Nancy, J. L., Esposito, R., Benvenuto, S., Dwivedi, D., Mohan, S., Ronchi, R., & de Carolis, M. (2020). Coronavirus and philosophers. *The European Journal of Psychoanalysis*. <https://www.journal-psychoanalysis.eu/coronavirus-and-philosophers/>.
7. Please see <https://www.newindianexpress.com/nation/2020/apr/19/covid-19-positive-nsa-detainee-flees-from-jabalpur-hospital-10000-bounty-declared-2132457.html> and <https://www.ndtv.com/india-news/coronavirus-updates-7-arrested-for-attacking-covid-19-health-staff-in-madhya-pradesh-indore-2205127>.
8. Fear of the unknown (FOTU) is defined as, "an individual's propensity to experience fear caused by the perceived absence of information at any level of consciousness or point of processing". FOTU has also been associated with intolerance of uncertainty (IU) which is defined as, "an individual's dispositional incapacity to endure the aversive response triggered by the perceived absence of salient, key, or sufficient information, and sustained by the associated perception of uncertainty." (Carleton, 2016; p.31). See R.N. Carleton, Into the Unknown: a review and synthesis of contemporary models involving uncertainty. *Journal of Anxiety Disorders*, 39 (2016), 10,30-43.
9. Sometimes referred to as sexual instincts, the life instincts are those which deal with basic survival, pleasure, and reproduction. These instincts are essential for sustaining the life of the individual as well as the continuation of the species. While we tend to think of life instincts in term of sexual procreation, these drives also include such things as thirst, hunger, and pain avoidance. The energy

created by the life instincts is known as libido. In his *Beyond the Pleasure Principle* (1920), Freud used the term "eros". The death drive opposes Eros. The death drive is sometimes referred to as "Thanatos" in post-Freudian thought, complementing "Eros", although this term was not used in Freud's own work, being rather introduced by Wilhelm Stekel in 1909 and then by Paul Federn in the present context. Please see Sigmund Freud (1955). "Beyond the pleasure principle". In *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, (1920-1922): *Beyond the Pleasure Principle, Group Psychology and Other Works*, XVIII, 1-64.

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Towards an Ethnography of Mass Media Discourses on COVID-19

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Abstract

Today, mass media play a significant role in our lives. The increasing impact of global mass media has often been equated with the dire effects of imperialism and globalization. Because, over the years, mass media have played an influential role in changing people's beliefs, norms, values, knowledge, behaviour, dress, language, and lifestyles. This study tries to portray an ethnographic understanding of mass media discourses on COVID-19. By integrating the mass media discourses on 'health', 'economy', 'politics', 'international relationships' and 'medical research', it tries to analyse "total social fact" surrounding COVID-19. The article shows that how mass media discourses are framed accordingly looking at the global/local political and economic situations where government, administrators, politicians, businessmen etc use it for disseminating their policies, order, agenda and products respectively.

Keywords: Media Anthropology; Ethnography; Mass Media Discourses on COVID-19;

Introduction

Relationship between human society and infectious disease is relatively a new phenomenon in comparison to the history of human existence¹ on mother Earth. Hardly any evidence prove the occurrence of infectious disease in the early human population with their hunting and gathering mode of subsistence. Instead, "archaeologically accessible human experiences" suggest that the spread of

infectious disease can be associated with the stage of human agricultural practices (Carmichael, 2006, p.6). Ancient skeletal or mummy remains reveal evidence of chronic tuberculosis, smallpox, schistosomiasis infections (Grmek, 1989). It suggests that diseases like measles and smallpox emerged with pastoralism and domestication of various animal species (Fiennes, 1978; McMichael, 2001). The settled life, rapid multiplication, and geographic localization of the human population especially during the Neolithic revolution have increased the burden of gastrointestinal and respiratory pathogens. The added vector capacity in the form of rats, mosquitoes, and other

1 Human existence grossly refers to the time period 2-1.8 million years ago, when some of the first species of genus Homo, i.e. Homo habilis and Homo erectus emerged.

commensal species has enhanced pathogen loads within settlements further.

However, complete awareness regarding epidemics and the invention of measures to combat them developed during the last fifty years of "industrial modernity". Especially since human society has started to make progress in the spheres of science, technology, and medicine. The history of human effort to combat some of the deadliest diseases like cholera, bubonic plague, smallpox, and influenza that have killed millions of people across the globe, can be equated with human society's progress from "ancient apocalypticism" to "quest of scientific explanation". It epitomizes the shift from a religious sentiment that encouraged resignation to natural catastrophes towards a stage where human society has able to find out scientific explanations of these catastrophes for charting out rational ways to combat them.

Interestingly, with the appearance of Acquired Immuno Deficiency Syndrome (AIDS) during the 1980s human society today has gone back to the uncertain stage again. Treatment of infectious diseases has become challenging owing to the microbial resistance due to which the mortality rate of the pandemics has increased (Simonsen et al., 1981; Swetha, Anantha Easwar & Gopalakrishnan, 2019). Despite the scientific rigour, the discourse around diseases like AIDS or Severe Acute Respiratory Syndrome (SARS) often revolves around the language that resonates the pre-modern accusation, blame and religious fundamentalism as the blame for the contemporary infectious disease are often passed on to 'dirty foreigners',

'promiscuous' gay men, 'prostitutes', 'junkies' (Washer, 2010, p. xiii).

This research tries to project an ethnographic understanding of mass media discourses on COVID-19. It can be seen as an exercise in the field of "media anthropology" which studies "structure, function, process and the impact of media information, technologies, professionals, audiences" (Allen, 1994, p.2). Traditionally ethnographic researches have always thrived upon "first-hand" information of "exotic communities" located in the remotest corners of the world. However, the inability of so doing in COVID-19 affected world have pushed this research to plunge into the world of electronic media broadcasts, newspaper reports, articles in the magazine and journals which are "transmitted across cultural boundaries" from "industrial countries to non-industrial countries, from central regions to peripheral areas" and vice-versa (Ossorio, 2001, p.77). Unlike "traditional anthropological ethnographies" (see Alasuutari, 1999; Uddin, 2015), the study has used these aforementioned as its primary sources of information. Nonetheless, the study hasn't restrained itself from application instruments (theories, concepts, research methods) common to the discipline of cultural anthropology onto the "investigated object", i.e. mass media discourses of COVID-19 (Spitulnik, 2002, pp.179-184). This study, by integrating the mass media discourses on 'health', 'economy', 'politics', 'international relationships' and 'medical research', tries to analyse "total social fact" surrounding COVID-19 pandemic (Spitulnik, 1993, p.293). Thus the study may help in understanding how mass media communications are produced which represent and at times shape human cultural values across the world (Machin & van Leeuwen 2007).

- 2 Particularly strong among Mediterranean cultures and deeply imbedded within early Christianity, imagined collapse as a battle lost, the divine actively in combat with mortals (Clifford, 2003).

Mass Media Discourses on COVID-19

The Emergence and Outbreak

While people around the world are still speculative about the original incidence surrounding the outbreak of COVID-19 pandemic in China, the first official statement released by the Chinese Government reveals that the alien pathogen of the Novel Coronavirus emerged from a seemingly ordinary case where an elderly couple from the nearby community visited the Hubei Provincial Hospital of Integrated Chinese and Western Medicine on December 26, 2019.

The old couple showed symptoms like fever, coughing, and tiredness, which looked like flu or common pneumonia at that instance. But the doctor looking after these patients, because of her experience of the SARS outbreak during 2003 found something unusual in their lungs CT scan reports. Doubts consolidate further when the lungs CT scan report of this elderly couple's son too showed similar abnormalities. On December 27, the hospital received another patient with similar symptoms and resembling abnormalities in the lungs. The blood tests of these four patients indicated viral infections. Arrivals of another three patients with similar lung images in the next two days rang the alarm within the medics and staff at the Hospital. On December 29, a 10 member expert committee was formed to convene the matter in hand. The committee concluded that the situation is indeed extraordinary. With the information of two similar cases in other hospitals, the committee requested the hospital to directly report to the municipal and provincial health authorities. Having received the reports on the same day the authorities order for an epidemiological investigation. Experts from Wuhan Jinyintan Hospital, a hospital designated to treat contagious diseases,

visited and fetched six of the seven patients with them (India Today, 2020).

On December 31, China reported a cluster of pneumonia cases in Wuhan, Hubei Province. The occurrence of a novel coronavirus was eventually identified. As an emergency measure and to deal with the possible outbreak, the World Health Organization (WHO) set up a three-level Incident Management Support Team (IMST) across its headquarter, regional headquarters, and country-level institutions. WHO published its first news on the disease outbreak on 5th January 2020. On January 12, China publicly shared the genetic sequence of COVID-19. On the very next day, officials confirmed the first recorded case of COVID-19 in Thailand, the first outside of China (WHO, 2020.a). Authorities in the US, Nepal, France, Australia, Malaysia, Singapore, South Korea, Vietnam, and Taiwan confirmed cases over the following few days.

On January 20, China reported their third death and more than 200 infections, with cases occurring outside Hubei province also including in Beijing, Shanghai, and Shenzhen. Meanwhile, WHO experts from China and Western Pacific regional offices conducted a brief field visit to Wuhan between January 20th -21st. These experts issued a statement on the very next day saying that there was evidence of human-to-human transmission in Wuhan but more investigation is needed to understand the full extent of transmission. On 28th January, a senior WHO delegation led by the Director-General travelled to Beijing and met China's leadership with an effort to understand measures taken and to offer technical assistance (WHO, 2020.a). By January 30, the death toll in China jumped to 170, with 7,711 reported cases in the country, where the virus had spread to all 31 provinces. Within a few days, countries like

India, Philippines, Russia, Spain, Sweden, the United Kingdom, Canada, Germany, Japan, the US, and the UAE confirmed new COVID-19 cases. With 811 deaths and 37,198 infected individuals in China, COVID-19 surpassed the death toll of the 2002-03 SARS epidemic on 9th February, 2020.

Between February 16 to 24, the WHO-China Joint mission, which included experts from Canada, Germany, Japan, Nigeria, Republic of Korea, Russia, Singapore, and the US (CDC, NIH) spent time in Beijing and also travelled to Wuhan and two other cities. In the meantime, by 20th February the death toll in China risen to 2,118 with 74,576 infected individuals. Countries across the world including Kuwait, Bahrain, Iraq, Oman, Qatar, Norway, Romania, Greece, Georgia, Pakistan, Afghanistan, North Macedonia, Brazil, Estonia, Denmark, Northern Ireland, and the Netherlands, Lithuania, and Wales confirmed COVID-19 cases in the following week. The situation around the world aggravates further with 2800 deaths and 82,000 individuals sufferings from infection. On 11th March 2020, deeply concerned both by the alarming levels of spread and severity of the infection WHO declared COVID-19 as a pandemic.

Since then it has spread to 223 countries infecting more than 117 million individuals and causing 2.6 million deaths. With more than 28.8 million affected individuals and 522469 deaths, the United States of America has been the worst victim of this pandemic. India, Brazil and Russian Federation respectively stand at second, third and fourth with 11262707, 11051665 and 4342474 infected individuals. Meanwhile, the effect has been most profound in the United Kingdom, France, Spain and Italy amongst the members of the European Union with 4223236, 3841807, 3160970, 3081368 infected individuals respectively (WHO, 2021).

The Source: Narrative and Counter-Narratives

The situation around the world is becoming gloomy with each passing day as many researchers are now beginning to agree that this new coronavirus will not be eradicated easily. Reason being that “with the change of season the virus might move to the southern hemisphere when the northern half of the globe heats up during its summer and vice versa” (Lauerman, 2020). Thus, the frequency of occurrence might decrease with the onset of summer, it might come back in the following winter as low humidity in the season makes droplets settle more slowly because they shrink to smaller sizes and then friction keeps them in the air (Renwick, 2020). Under such a situation, many countries are now giving concerted effort in tracking the actual source and cause of the outbreak.

Being the worst sufferers, the US is leading the pack. Almost from the initial stages of the spread of COVID-19 in the US, President Trump is calling it a Chinese virus. Influential US Senator Tom Cotton also gave a TV interview echoing in the same manner. The French Nobel laureate Luc Montagnier stirred controversy further with his claim in an interview with the French CNews channel that the coronavirus has come from Wuhan’s lab. He claimed that the presence of elements of HIV in the genome of the coronavirus and even elements of the “germ of malaria” makes it highly suspect (Dutta PK, 2020; Awasthi, 2020). The theory of COVID-19 as a Chinese conspiracy is gaining momentum since then. There were serious allegations like that the Chinese government has covered the initial reports, denied access to the external experts from WHO to explore the early COVID-19 situation in China. And finally, after a long delay, when the admitted has shown Wuhan seafood and animal meat market as

the source of the outbreak, which is only about 25-30 kilometres away from China's premier virus research centre, the Wuhan Institute of Virology. It fuelled America's long-held suspicion of China maintaining an offensive Biological Weapon Program and the Wuhan Institute of Virology being the epicentre even after signing the Biological Weapon Convention (BWC) in 1984. The speculation about America's stand came to an end with the filing of a \$20-trillion lawsuit against China in the US, which is much more than China's gross domestic product (GDP) (Dutta PK, 2020). Even a country like Israel also is not much behind. The Israeli authorities too are suspecting that COVID-19 may have originated from a laboratory in Wuhan which is working with deadly viruses. Israeli scientist Danny Shoham, a microbiologist and a senior analyst of Israeli Military Intelligence for Biological and Chemical warfare, also said that the Institute is linked to Beijing's Covert Biological Weapon Program (Khurshid, 2020).

Meanwhile, the Chinese believe that the virus is created by the Americans as the virus is genetically shaped in US laboratories. The spokeswoman Hua Chunying of the Ministry of Foreign Affairs, China has released a statement on January 30, 2020, that they found eight containers with Biohazard labels wrapped in two layers of tarpaulin buried at a depth of one and a half meters in the backyard of American Consulate in Wuhan (Khurshid, 2020; Rehman, 2020). A few Russian scientists and the Russian media indicated that COVID-19 could be an American made bioweapon and the episode in Wuhan can be seen as an effort of disrupting the Chinese economy and making money. The Russian news agency RIA Novosti has claimed that Nikulin, a former member of the UN Commission on Biological and Chemical Weapons claims that he was

contacted by Chinese colleagues who believe that the Coronavirus is manmade. He reported that the spread is sabotage and also speculated that this dangerous cargo from an American laboratory might have been carried out by US diplomatic staff to Wuhan (Nikulin, 2020). The struggle for supremacy, especially the recent rise in tension between America and China on matters of trade, south China sea, and 5G internet might have pushed America to take such drastic measures (Ebb, 2020).

The scientific studies (e.g. Anderson et al., 2020) and a scientific community at large however refute all these claims. While analysing and comparing the genome of the SARS-CoV-2 with other coronaviruses Anderson et al. (2020) have declared that "SARS-CoV-2 is not a laboratory construct or a purposefully manipulated virus." According to them, the high-affinity binding of the SARS-CoV-2 spike protein to human ACE-2 is most likely to be the result of natural selection on a human or human-like ACE-2 that permits another optimal binding solution to arise. Jean-Francois Delfraissy, an immunologist and head of the scientific council that advises the French government on the COVID-19 pandemic, in an interview by French television BFM TV said that the hypothesis that a virus was created in a laboratory in Wuhan sounded much like "a conspiracy vision that does not relate to the real science". Olivier Schwartz, head of the virus and immunity department of France's Pasteur Institute also denied possibilities of COVID-19 being human-made. The genetic sequence of COVID-19 was first released by the Chinese team has been verified by many other laboratories, including Pasteur Institute, which was the first in Europe to do so. The genetic heritage of COVID-19 shows 80 percent homological similarity with Sars-CoV-1. Besides, the same virus is found in different animals like

pangolin and the bat, where the percentage of similarities is greater than 95 percent. It proves that the virus is derived from viruses that circulate in nature (Huaxia, 2020).

In-fact, the origin of the COVID-19 virus could be a perfect example where capitalism commodifies life to turn it into profit and in the process directly endangers human life. In other words, the on-going pandemic might be a product of unrestrained capitalist production and consumption patterns and is very much part of the deleterious environmental changes it is causing (Kolinjivadi, 2020). The stark differences in COVID death ratio in the USA and China with respect to their total population 629:1 and 302115:1 respectively³. It shows the existing health care difference between capitalist and socialist countries.

Historically, with the growth of mass food production, humans have always strived for more natural resources and encroached upon the natural habitats that have exposed them to many unknown pathogens. Following the growth in agriculture, the formation of large-scale farms, where massive numbers of livestock and poultry packed into megabarns has created the perfect environment for the mutation and emergence of new diseases such as hepatitis E, Nipah virus, Q fever, and others (Wallace, 2016). The same might have happened in the case of COVID-19 as the outbreaks of Ebola and other coronaviruses such as MERS, for instance, were triggered by a jump from animal to human in disturbed natural habitats. The rural population associated to the wet market in Wuhan might have been allured by possibilities of mass-scale breeding of wild animals, including pangolins, civet cats, foxes, wild geese, and

boar among many others is a \$74 billion industry in China.

Preventive Measures, "Social-Distancing" and Indian Health-Care System

India reported its first COVID-19 case on 30th January 2020 in the state of Kerala. The affected had a travel history from Wuhan, China. Indian Government imposed a mandatory thermal screening of arriving from China. The screenings were performed at twenty airports in India (The Economic Times, 2020.a; The Hindu 2020). The situation in India then was not that alarming as there were occurrences of sporadic COVID-19 cases in February. The Indian government, however, decided not to take any chances and extended the rule of mandatory screening for passengers coming from Thailand, Singapore, Hong Kong, Japan and South Korea Nepal, Vietnam, Indonesia and Malaysia by the end of February (Sharma & Nidheesh, 2020; Outlook, 2020). But doubts were raised over the efficacy of all these measures amid minimal public awareness, inadequate testing infrastructure and the absence of a comprehensive nation-wide surveillance system in India (Tharoor, 2020).

Meanwhile, 22 new cases came to light on 4th March including an Italian tourist group with 14 infected members (Perapaddan, 2020). The rate of transmission escalated in March, as different other states like Maharashtra, Delhi, Madhya Pradesh, Gujarat, Andhra Pradesh, Karnataka, West Bengal, Rajasthan etc. have also reported about the occurrences of COVID-19 cases, all with a travel history to affected countries. With the declaration of the outbreak the Indian government, keeping in mind the provisions of the Epidemic Disease Act, 1897, has ordered to shut down educational institutions and commercial establishments and suspended all tourist

3 Total population of USA is 33 crore and number of COVID death is 525000 and total population in China is 140 crore and COVID death is 4634.

visas (Sanyal, 2020). After a 14-hour voluntary lockdown on 22nd March and lockdown of 75 COVID affected districts and all major cities on the following day, on 24th March the government has imposed a nation-wide lockdown for 21 days. On 14th April which was extended further till 3rd May (Regan, Mitra & Gupta, 2020; Withnall, 2020; Rai, 2020).

To break the cycle of transmission and tame the spread of coronavirus, the Indian government has also emphasized the need for “social distancing”, i.e. maintaining at least one-meter distance from one another. But due to the huge density and low level of education, economic disparity, and religious fanaticism amongst its different sections of the Indian population, the actual applicability of “social distancing” is a matter of great concern. Because “washing hands multiple times a day” or maintaining social distance would be a huge challenge for a large chunk of India’s underprivileged rural population who don’t have another room to go into.

Instances of people not complying with the government order of “social distancing” by attending religious gathering have been reported. Sikh preacher attending Anandpur Sahib festival and Tablighi Jamaat religious congregation event are two prominent examples. The infection has been greatly spread from these two separate cases. The first case led to twenty-seven COVID-19 cases and 40,000 people sent to quarantine (BBC News, 2020; Press Trust of India, 2020.a), while the Health Ministry confirmed that the second case resulted in 4,291 out of 14,378 confirmed cases in 23 Indian states and union territories till 18th April (Press Trust of India, 2020.b). There have been several reported instances of patients trying to flee government hospital isolation wards and hiding travel history. Further, many with exposure to suspected

COVID-19 cases or infected persons have also tried to dodge the mandatory home quarantine (Chatterje, 2020).

The reason behind such instances is quite clear. India’s health policies have always largely focused on medical services and neglected the public health services, and implementation of basic public health regulations (Das Gupta, 2005). India has a ratio of 10,000 to 1 doctor in rural areas. Government expenditure on health in India still hovers around 1.5 percent of its GDP, one of the lowest in the world. Ironically, government data suggests that 52 percent of urban and 44 percent of rural households depends upon the private health sector (Chatterje, 2020). There is no doubt that in the plight of COVID-19 Indian government has adopted quite a radical approach for the upliftment of health-care facilities in the country. Prime Minister Narendra Modi has announced to provide \$2 billion to boost infrastructure through increased availability of testing facilities, isolation beds, ICU beds, ventilators, and other necessary tools. But as Giridhara Babu, Head, Lifecourse Epidemiology at the Public Health Foundation of India states “the faith in the public health system cannot emerge immediately as a response to the pandemic”.

Inadequate number of tests conducted during the lockdown period is another cause of concern. Especially because, India’s top medical body, the Indian Council of Medical Research (ICMR) has admitted that out of 100 infected individual 80 don’t have symptoms (Thacker, 2020). Testing centres are too little to handle a population of 1.35 billion people. The number of beds in government-run quarantine facilities across the country is inadequate, to say the least (Changoiwala, 2020; ANI, 2020; Tripathi, 2020). India had performed around 100,000 tests only till 5th of April — a rate of nearly

47 tests per million people compared with 4,572 tests per million in the U.S., 2,753 tests per million in the U.K, and 8,800 per million in South Korea (Biswas, 2020; Nandi, 2020). It probably masked the true number of infected individuals in the country. With the approval for using the rapid antibody test and RNA extraction kit brought in from China, the number of tests reached 716733 by 27th of April (GOI, 2020). However, with a couple of state health departments complaining about the efficacy of these kits (Singh SS, 2020; Press Trust of India, 2020.c.), ICMR has ordered not to use rapid antibody test kit until further notice.

Lockdown or Herd Immunity? Lives or Economy?

The opinion of the entire nation is now in a split around the most important question under the current situation, i.e. how far successful the strategy of lockdown has been for India? The economists are advocating for “herd-immunity” saying that only lockdown will not be able to take any country out of such a terrible situation. Meanwhile, healthcare professionals are in favour of lockdown as millions of lives may get jeopardized while achieving “herd immunity”.

Some of the most renowned Indian economists like Arup Mitra, professor of economics at Institute of Economic Growth in New Delhi and Swaminathan Aiyar, a renowned economist, journalist and columnist have expressed their concern over India’s ability to continue this lockdown for a long period. Since “there is a danger that apart from the virus itself, hunger will kill more people” (The Economic Times, 2020.b.). To them, the lockdown may help in reducing the immediate load on the healthcare system and correspondingly reduce the avoidable deaths. But it might also drag the economy backward by years, where managing poverty will be a bigger

challenge for India than the pandemic. The lockdown may cause economic devastation especially for informal workers, micro and small enterprises, farmers and the self-employed (Kishore, 2020; Ray, Subramanian & Vandewalle, 2020).

Statistics show that the lockdown has able to slow down the exponential growth in the spread of infection that the medical experts have been fearing from the beginning. The number of infected individuals is doubling every 6 days by 6th of April and every 8 days by 18th of April (Basu & Ramesh, 2020; Gupta, 2020.a.). But at the same time, the unemployment data which has tripled in weeks following the onset of lockdown indicate that poverty has increased significantly. With the absence of transportation and access to the market, they are left with almost no choice. The International Labour Organization (ILO) has also expressed their concern on this matter as over 400 million Indians, including migrant workers and daily wage earners, are at risk of being pushed deeper into poverty because of the COVID-19 pandemic (Nanda, 2020). Understandably the situation has led to anguish and violation. It forced thousands of migrant workers to turn up at the railway or bus station in the hope that they may be able to find some transport to return home (Pandey, 2020).

The economists are saying a large section of the Indian population is young, i.e. below 35 years. Therefore, by protecting the elderly, India should adopt the “herd immunity” strategy (Altstedter, 2020). Because eventually, enough people in India need to become immune to the disease to meaningfully slow its spread. Especially since the “herd immunity” strategy has worked well for India in the past in cases of measles, mumps, polio, and chickenpox where immunity was attained through vaccination. But the

healthcare professionals are emphasizing that achieving herd immunity against COVID-19 in a country like India with a huge population base would be a real challenge in the absence of a vaccine. The reason being, as John Hopkins School of Public Health, suggests that depending upon how contagious infection is, usually 70 per cent to 90 per cent of a population needs immunity to achieve herd immunity. It could easily overwhelm the Indian health-care system. Due to this reason, some of the top health-care professionals like Dr Giridhara R Babu, Professor and Head, Life Course Epidemiology at Public Health Foundation of India, stated that herd immunity strategy is unthinkable for India at this stage, especially given that the country is emerging from a prolonged lockdown. Immediate resumption of activities in the post lockdown period might lead to a second wave of infection due to unchecked cases (Venkataraman, 2020).

Migration, International Relationship and Medical Research

With the worldwide spread of “neoliberalism”, human societies are so accustomed to the forces of globalization where the entire world is integrated through, information technology, trade and finance culture, ideas and people (Mondal, 2007). All of sudden this pandemic has provided a lot of new agendas for political leaders administrators and Statesmen across the world to ponder upon. The majority of governments across the globe have responded by closing down the national borders. Each nation, even the states within a nation and the districts within a state are now giving priorities to their own people and thinking about saving as many lives as possible.

The previous experiences of AIDS, SARS, H1N1 and Ebola outbreaks, though, suggest

that containment and travel ban will not stop the virus from spreading (Belluz & Hoffman, 2020). Instead, the containment policies in the long-run have all the potency of creating another threat in the form of stagnancy in labour migration. One of the core examples of this crisis is millions of migrant workers remaining stuck with almost no source of livelihood due to the closure of state boundaries. Halt in the issuance of green card in the US is another dimension (Narea, 2020). With no drastic improvement of the situation, most of the developed nations including some of the major ones under the EU, in all likelihood, will rethink their policies concerning cross-border migration. This will seriously impact the lives of those people who are already living or looking forward to settling in some of these nations.

The pandemic has also provided new dimensions to international relations especially over the issue of cooperation and non-cooperation. Many countries including the US have blamed China for their negligence over the declaration of the actual severity of the novel coronavirus outbreak in their country. Italy and Spain expressed their concern over the non-satisfactory role of the European Union (EU). As few prominent members including the Netherlands have opposed the idea of creating a common fund for paying off the debt in corona affected countries under the EU (Lowen, 2020). The Spanish officials have accused Turkey for seizing hundreds of ventilators and sanitary equipment destined for Spain amid the escalating coronavirus pandemic (Embury-Dennis, 2020). Meanwhile, leaders of Nepal, Maldives, Sri Lanka, Bhutan, Bangladesh and Afghanistan welcomed Indian prime minister Narendra Modi's proposal of SAARC nations jointly fighting the pandemic (Press Trust of India, 2020.d.) and

the decision of allocating 74 crore rupees (US\$10 million) as COVID-19 Emergency Fund (Jagannath, 2020).

WHO has expressed its concern over mounting disruption to the global supply of personal protective equipment (PPEs). The rising demand, panic buying, hoarding and misuse of PPEs like gloves, medical masks, respirators, goggles, face shields, gowns and aprons are creating a critical shortage and putting the lives of the health-care workers at great risks taking care of COVID-19 patients (Begg, 2020). Many countries, therefore, have looked to supply masks, gloves, instruments and protective equipment. India, for example, has sent a medical shipment to China which include 15 tons of masks, gloves and other emergency medical equipment (Press Trust of India, 2020.e.). Cuba and Vietnam send their doctors, nurses and volunteers to the US to save lives from COVID 19. India has also sent a team of 15 doctors and health care professionals to Kuwait for assisting them in its fight against coronavirus (Roche, 2020).

With no specific cure, COVID-19 has changed the scenario in the global pharmaceutical market. The supply of medicines has become a major issue across the world. With the shutdown of Chinese factories due to coronavirus outbreak, India has become an alternative supplier of active pharmaceutical ingredients for global drugmakers (Srivastava, 2020). Hence the Indian government has ordered to ramp up the production of pharmaceutical ingredients. US President Donald Trump has expressed his concern over India's imposition of a ban over the export of 'hydroxychloroquine' which has been partially reverted later after threats of retaliation from the US (Krishnan 2020). As part of the positive diplomatic gesture, India has sent 85 million 'hydroxychloroquine'

and 500 million paracetamol tablets to 108 countries with an additional one thousand ton of mixture to make paracetamol (Gupta, 2020.b).

Researchers across the world have already started to look for all possible remedies to COVID-19. Development of COVID-19 vaccine is one of them. Previous experiences of flue and SARS outbreak have prompted scientists to share the genome sequence of COVID-19 quickly. It helped research to begin so quickly and vaccine development programmes were undertaken at the laboratories in the USA, Canada, Austria, Italy, Germany, France, Australia, Argentina, Spain, UK, China, South Korea, India, Singapore etc. (WHO, 2020.b; Lane, 2020; Sinha DK, 2020). Sarah Gilbert, Professor of Vaccinology at the University of Oxford in the UK and her team's effort was one of the prominent examples. They received an awarded of £2.2 million grant from UK's National Institute for Health Research and the UK Research and Innovation in March 2020 to scale up their initiative. Serum Institute of India and Sanofi Pasteur, France tried to do the same. Moderna Inc., MA, USA tried an alternative strategy, i.e. to generate antibodies against the spike proteins of the virus. Meanwhile, a German enterprise, CureVac, aimed to design an RNA-based vaccine against the virus.

However, doubts were looming over the possibility of actually getting the COVID-19 vaccine for public use as vaccines needed to pass through several critical stages like "exploratory", "pre-clinical", "clinical", "regulatory review and approval", "manufacturing" and "quality control" (Centre for Disease Control and Prevention, 2020). With US President Donald Trump's announcement of curtailing the US contribution to WHO when it most needed a few (e.g. Farrel,

2020) considered that international politics might make the development of COVID-19 vaccines much harder.

But the reality turned out to be different. With six vaccines getting approval for public use and 75 more under clinical trial on human there has been steep competition amongst the researcher of different countries to develop effective vaccines within a short period (Zimmer, Corum & Wee, 2021). Though the efficacy of one particular vaccine for the entire population over the world has been under question because of mutation within the novel coronavirus strands since the inception. As many as 11 variants of COVID-19 virus have been identified of which most 'A²' deadliest and seem to be replacing some of the other variants like 'O', A³, B, B¹ etc. (Dutta SS, 2020). This makes the role of WHO all the more important which helps in coordinating the "Flu Network" and providing a common platform for researchers from different countries to share their initial immunological response.

Conclusion

Today, mass media play quite a pivotal role in our lives. People see the same film, same television programme and the same news footages across the globe. Moreover, they listen to same music, read the same bestsellers and news reports almost without any modifications. However, such unprecedented growth of mass media has often been associated with the dire effects of globalization. The critics (e.g. Herman & Chomsky, 2002) especially see it a force working in favour of "global cultural homogeneity" — which often marginalizes the "local cultures and "languages", making the coexistence of alternative views and voices dismal, to say the least. With Rupert Murdoch and Mukesh Ambani investing money in mass media then it becomes obvious that those media must be serving

the needs of those corporates. Due to which many nation-states have and still try to keep out what they often see as threats against their beliefs and ways of life. Blocking of western news and entertainment media such as CNN, NBC, the Washington Post, and the websites of the BBC by the Chinese government is one of the prime examples.

The outbreak of COVID-19 not only has created a worldwide health crisis but also has changed quite a lot of things especially the way people perceive and live their everyday lives. Undoubtedly, the severity, pattern and mode of transmission have endangered peoples' sense of security and safety putting them into a state of containment. But it has made the role of mass media undeniably more important not only for common people but for academicians and researchers across the world also. Because, mass media provides them with a window (perhaps the only possible one under the current situation) through which all these people recept, perceive and can make sense of things happening across the globe.

Findings of this study show that the global media discourses on COVID-19, in general, projecting the possibilities of a world economic decline, but versions are non-uniform. Discourses on the possibilities of the healthcare crisis of COVID-19 on developing countries and the economic impact on the unorganized sector especially by the western and Asian media are not in tune with one another. The local media in several Asian countries is not subscribing to the western view of "absolute backward progression of the economy" due to prolonged lockdown in their respective countries. They, on the contrary, have given more emphasis to the "requirements of lockdown" and healthcare benefits behind them. The western media have also accused a few Asian countries like India and Bangladesh for underplaying the number

of COVID-19 infected individuals owing to the inadequate number of test conducted during the lockdown. Meanwhile, the local media have tried to project each country's perspectives by showing the state of health-care facilities and lack of testing infrastructure. All of these indicate that the field of mass media in itself is a contested one, which is often characterised by cacophony and disjuncture. Here the worlds of "nation-state with their national languages and culture" and the "global world with the emerging global language of the international organization" do coexist however uneasily they may seem (Machin & van Leeuwen, 2007, p.2).

The study shows how mass media discourses on COVID-19 are rooted in wider contexts of global/local economic and political scenario. Further, it reinstates the fact that mass media is only a tool or instrument which is used for exercising power within society, because it plays an influential role in changing beliefs, norms, values, knowledge, behaviour, dress, language, and lifestyles (Liechty, 2010; Bhandari, 2019). Governments, businessmen and political parties just use it for disseminating their policies, products, and ideological agendas respectively (Shneiderman & Turin, 2004; Wolford, 2007, p.19). The opposing views of the US and the Chinese government over the source and cause of the outbreak, for example, become meaningful only when they are placed within a larger context of "global political economy". "Accusing China for the outbreak" and calling it "an American conspiracy" can respectively be seen as efforts on part of the US and China to retain global supremacy. The rift of opinion regarding the lockdown between the economists and the healthcare professional in India is also a part of the same procedure. Both economists and healthcare professionals have used media as a tool to convey their views

to the common people, decision-makers in the country and the audience at large.

But how all of these make an overall impact? The dire effects of global mass media have indeed been at work in case of COVID-19 pandemic as well. A section of the mass media can be held responsible for spreading the misinformation regarding "COVID-19 being a genetically engineered bioweapon released from the laboratory in Wuhan". Especially since this rumour had all the potency of threatening the working relationship between the Chinese and Western scientists participating in vaccine development programme (Hussain, 2020). But then the other section of media has taken the responsibility of portraying the counter version that the "scientific evidence suggests that the outbreak of COVID-19 in all likelihood is a natural phenomenon". It is true, a section of mass media has stigmatized people especially in the initial stages of the outbreak, which is awful considering that it led people to hide illness and avoid seeking healthcare advice in fear of discrimination. It hindered the management of the outbreak. But there is also no denying the fact that media has played a crucial role in building awareness regarding "social distancing", especially in developing countries where illiteracy is a major cause of concern. Moreover, mass media has kept people updated regarding the recent turn of the event concerning national and international politics, and most importantly COVID-19 treatment and research. It certainly has helped in keeping the hopes alive within this turmoil. Finally, all of which indicates that the onus is on the audience who based on their rationale and interest can decide about contents mass media discourses, in terms of what they want to see and believe in, and how that affects their lives (Liechty, 2010).

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COVID-19 and Pseudoscience: An Infodemic in the Time of Pandemic

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Corona viruses are a group of RNA viruses which generally causes respiratory diseases in human. Two such mutated strains of corona viruses i.e. Severe acute respiratory syndrome-CoV (SARS)-CoV and the Middle East respiratory syndrome (MERS)-CoV have resulted in great threat to human health. At the end of December 2019, a group of patients were admitted in the hospitals of Wuhan with an initial diagnosis of pneumonia of an unknown etiology. All these patients were linked with seafood and wet animal market in Wuhan, Hubei Province, China. On February 11, 2020

World health Organisation named it as 2019 Novel (New) Coronavirus (COVID-19). The disease has an ability to spread very rapidly. First patient was reported in China on December 18, 2019 and within a month or two it became an pandemic effecting almost all the countries in the world (Du Toit, 2020; Ren *et al.* 2020; Rothan and Byrareddy, 2020). As on 9th June 2020 more than 7 million cases of COVID 19 has been reported from different parts of world and more than 400000 people have died from this disease (WHO situation report on 9th June, 2020).

Situation in numbers (by WHO Region)		
Total (new cases in last 24 hours)		
Globally	7 039 918 cases (108 918)	404 396 deaths (3 539)
Africa	140 498 cases (5 086)	3 352 deaths (116)
Americas	3 366 251 cases (54 864)	183 950 deaths (2 146)
Eastern Mediterranean	658 614 cases (17 185)	14 913 deaths (311)
Europe	2 303 361 cases (16 801)	184 671 deaths (551)
South-East Asia	378 118 cases (13 922)	10 376 deaths (406)
Western Pacific	192 335 cases (1 060)	7 121 deaths (9)

Figure 1: Total number of infected person globally and in different continent (https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200609-covid-19-sitrep-141.pdf?sfvrsn=72fa1b16_2)

From the data (Fig. 1) stated above it is quite clear that the virus is highly contagious. It is mostly transmitted via person to person by direct contact or through respiratory droplet. Even asymptomatic patients can transmit the disease. The most common symptoms are fever, cough and fatigue, while in some cases symptoms like sputum production, head-ache, haemoptysis, diarrhoea, dyspnoea, and lymphopenia was observed (Ren *et al.* 2020; Huang *et al.* 2020; Wang *et al.* 2020; Carlos *et al.* 2020; Fig. 2). At present, no specific

drug or vaccine is available against the disease. Broad spectrum antiviral drugs like nucleoside analogues; HIV protease inhibitor is helpful in treating patients. Combination of drugs like oseltamivir, lopinavir, ritonavir, ganciclovir, remdisvir, chloroquine has shown some results in treating patients (Chen *et al.* 2020, Wang *et al.* 2020). Convalescent plasma therapy using plasma from already cured patients have also shown good results in treating patients (Duan *et al.*, 2020; Zhao *et al.*, 2020, Jiang *et al.* 2020).

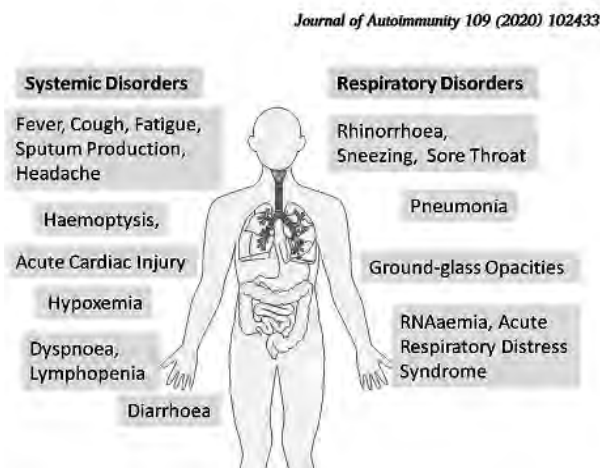


Figure 2: Effect of Covid-19 in human body (Rothan and Byrareddy 2020)

Although mortality rate is comparatively low but as it is highly contagious it shattered the health systems leading towards panic-stricken situations. Most of the countries have gone for lockdown to stop the spread of disease. Scientific communities throughout the world are trying to find vaccines, medicines but still no positive outcome has been found. Steep rise of number of patients, along with the

number of deaths, absence of any treatment is creating a huge panic among people. Even after almost complete lockdown in most of the countries, the graph of patients is still rising steeply with no flattening of infection rate. (Fig. 3, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200601-covid-19-sitrep-133.pdf?sfvrsn=9a56f2ac_4).

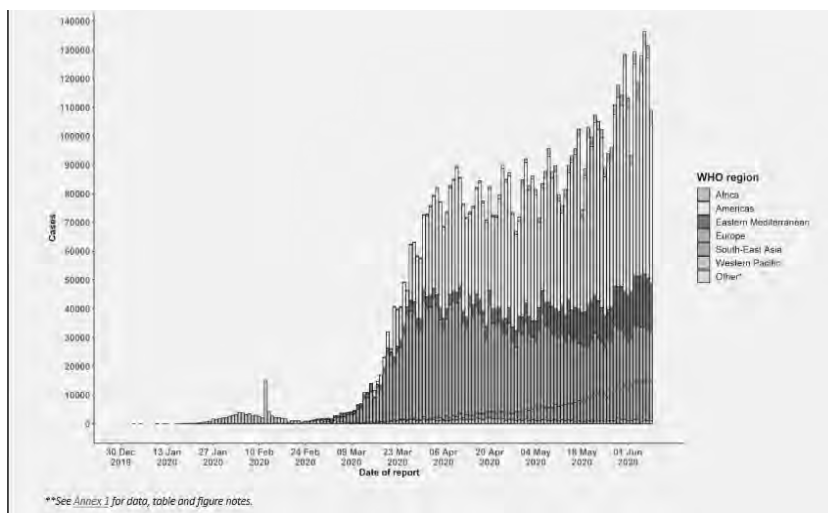


Figure 3: Distribution of COVID-19 cases from the first reported case (WHO situation report)

In the present scenario world is facing a crisis situation both physically, socially and economically. When the scientific community is frantically searching for a remedy to this highly contagious disease, pseudoscientific ideology is creating an utter nuisance. Now what is pseudoscience and how it is different from science.

Pseudoscience is derived from the Greek word pseudo meaning false and science, has originated from latin word scientia, meaning "knowledge". The term pseudoscience was first used in the late 18th century (<https://en.wikipedia.org/wiki/Pseudoscience>). Pseudoscience consists of statements, beliefs, or practices which practitioners claimed to be both scientific and factual, but they are incompatible with any scientific method (Cover and Curd, 1998). Science commonly relies on a continuous cycle of hypothesis, prediction, testing and questioning. In pseudoscience there is no such scope of testing and questioning and retesting of the facts. Pseudoscience although it claims to be science it does not follow any accepted scientific standards. Pseudoscience uses vague, exaggerated,

unstable claim, which has no experimental proof. Besides, it also uses misleading scientific terms to mislead commoners. Pseudoscientific beliefs are very common in developing countries where literacy level is quite low and poverty level is higher but surprisingly it is also very common in developed countries with high rate of literacy (Fig. 4).

Science vs. Pseudoscience	
Its goal is to achieve a more complete understanding of the physical world. There is research to back up their claims. Constantly looking to expand knowledge of the subject. Explanations must be stated in clear, unambiguous terms.	Its goal is more likely to be driven by personal or private gains (profit or fame). Little evidence to support their ideas and the research that is carried out tries only to prove they are right. Pseudoscientific explanations tend to be vague and ambiguous.

Figure 4: Difference between pseudoscience and science (<https://slideplayer.com/slide/7794293/>)

In this extremely panic situation, when daily rise of patient is quite high, pseudoscientific thoughts are creating another problem by misleading people from the actual precaution protocol. A

wave of pseudoscientific advices coming from several sources and some from even some government spokesperson hit the world in this few months has caused lot of problem. World Health Organisation (WHO) has called this an 'infodemic' in the time of pandemic. Pseudoscientific thoughts have come from all parts of the world during this crisis. One of the world's most powerful leaders has proposed that injecting human body with disinfectant will help in combating COVID -19. The most common and prevalent pseudoscientific idea was that COVID will be killed by the heat waves in South Asian countries which experience a very hot and humid summer (Shi et al., 2020, Yuan et al.,

2020, <https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/india-did-have-an-innate-natural-shield-against-coronavirus-after-all/articleshow/74453719.cms?from=mdr>). Although several experimental results showed that no such effect on COVID-19 (Bukhari and Jameel, 2020, Baker et al. 2020, Auler et al., 2020), people continued to believe and most importantly, spokesperson of several countries continued to profess this belief in public statements. But now the high rise of cases in India during summer season has already proved this pseudoscientific hypothesis wrong (Fig. 5) ([https://www.who.int/india/emergencies/coronavirus-disease-\(covid-19\)/india-situation-report](https://www.who.int/india/emergencies/coronavirus-disease-(covid-19)/india-situation-report)).

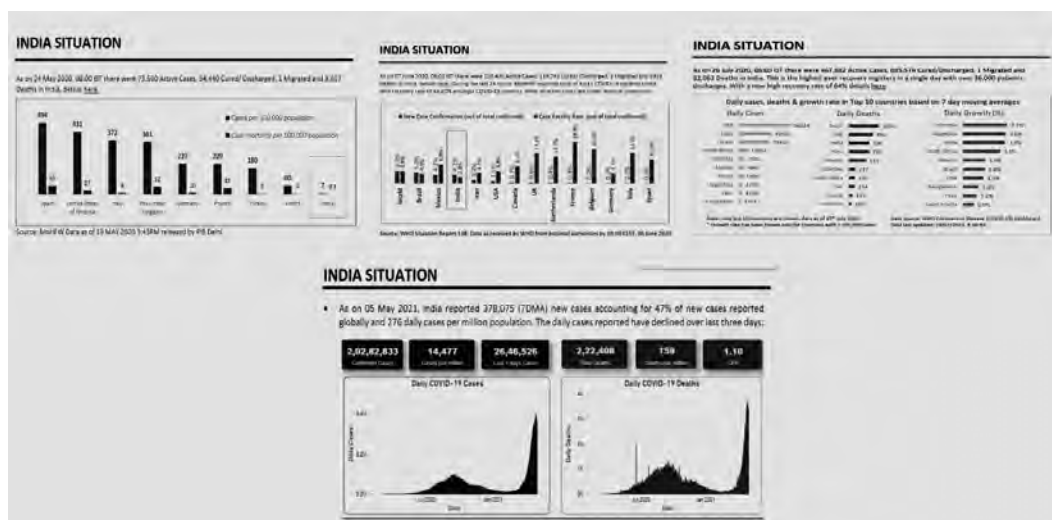


Figure 5: Data showing cases in India, from summer 2020 and summer 2021 (WHO status report; [https://www.who.int/india/emergencies/coronavirus-disease-\(covid-19\)/india-situation-report](https://www.who.int/india/emergencies/coronavirus-disease-(covid-19)/india-situation-report))

Ever since the Coronavirus outbreak, both political and spiritual leaders throughout the world with huge blind followers came up with weird suggestions to combat the disease. In India, some such leader suggested that drinking cow urine on a daily basis can get rid of COVID-19 (<https://www.hindustantimes.com/india-news/drink-cow-urine-to-prevent-covid-bjp-mp-pragya-thakur-experts-reject-remark-101621298599190.html>). After that, several political leaders even arranged Cow urine drinking parties in several parts of India involving a large mass of people without maintaining

com/india-news/drink-cow-urine-to-prevent-covid-bjp-mp-pragya-thakur-experts-reject-remark-101621298599190.html). After that, several political leaders even arranged Cow urine drinking parties in several parts of India involving a large mass of people without maintaining

any social distancing. In this context we should keep in mind, WHO suggested that maintain social distancing is one of the main protective measures to combat COVID-19. In a country, where people even believe that wearing mask can cause oxygen deficiency, such information coming from religious gurus is very dangerous. Similarly, some proclaimed 'baba' or 'sadhu' has claimed that ayurvedic remedies can cure Coronavirus without any scientific proof (<https://www.deccanchronicle.com/lifestyle/health-and-wellbeing/290420/pasudo-science-and-miracle-cures-peak-amid-pandemic.html>). Not only in India, renowned institutions like Cleveland clinic in Ohio, have suggested that Reiki can boost your immune system to fight against COVID-19. Public health providers in Canada and UK also suggested homeopathy for curing COVID-19 without any hard-core proof (Caulfield, 2020). Immunity boosters like Arsenic album, Ayush kadwa are being publicised widely by mass media (<https://www.news18.com>, <https://health.economictimes.indiatimes.com>) and these are also being promoted by various agencies which do not have any strong scientific evidence of being effective against COVID-19. But all those agencies are marketing them as being effective against COVID-19 which is a false statement. This will deceive people and they will not follow the actual precautionary procedures prescribed by WHO and other eminent health institutions.

We actually live in a world where anti-vaccination advocates and climate change denials still persist. It is very easy to make people believe in pseudoscientific thought and practices, especially when social media amplifies pseudoscience or miracle messages compared to the proven scientific thoughts (Caulfield 2020). Misleading messages can harm people rather than giving them any benefit and in this pandemic

situation when the world is hiding behind the closed doors of houses to stay safe, we certainly don't want more trouble for human kind. So, in this situation, we must act more responsibly and rationally, so that verified scientific messages may reach common people. Spokesperson of different communities and countries should take more responsibility to spread scientifically well researched ideas to the world, rather than any random ideas. To combat and protect ourselves from COVID-19, we should only trust on organisations like World Health Organisation, the Centre for Disease Control, or the Ministry of Health, Government of India etc. As WHO has rightfully said, we have to live with COVID-19, we have to take our safety measures more seriously as we are approaching the various "Unlock" phases after several months of lockdown. Wearing 3-ply mask in public places, maintain social distancing, avoiding any social gathering, washing hands with soap, sanitising hands with alcohol based sanitizers can actually protect us from getting infected. Instead of practising the pseudoscientific beliefs, visiting a doctor or health centre whenever we have any COVID-19 disease symptom and quarantining can give us an edge in the fight against the disease. If we all can behave responsibly we can surely win, the fight not only against the COVID-19 but also restrict the spread of such diseases in near future.

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COVID-19 Pandemic and Lockdown: Staring Eyes from Rural Areas in India

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Covid-19 pandemic has created a mess across the world recently. India is also passing through a tough situation as the number of infected or active cases is increasing rapidly. Both central and state governments have taken different measures to stop the spread of COVID-19 in our country. Amidst strong restrictions of movement i.e. lockdown that have dramatically changed the daily lives and impact on agricultural livelihoods, is the primary and most important step. National lockdown has the horrible effect on millions of Indian rural workers, who survive on daily earnings and work in India's large unofficial sectors. The stoppage of economic wheel destined that they have no means of livelihood in their places of work, or their family to sustain that they desired to survive without any source of income for a prolonged period of the lockdown. This is particularly applicable for farmers, tailors, fisher-men, daily labourers, potters, barbers, oil press refineries, leather-workers, carpenters, priests etc. Many of them depend on public vehicles to move their products to markets for selling or buying different essential materials to use. But when travel restrictions are imposed that reduce drastically mobility of lives, many will hurriedly be unable to find their source of livelihood. It is worth mentioning that in India a huge number of rural inhabitants are not sheltered

by health insurance or any other income protections, for example paid sick leave or any other unemployment beneficial schemes, and consequently, they are facing food, nutrition and health insecurity. It has been found that those families of daily-labourers' or who working for a daily wage are often deprived of daily three time meals because of reduced income or shortage of harvested crops. Consequently, problems in achieving adequate nutritious diet seemed to be vulnerable for high infections. It is established a link between poverty and infection in rural areas, showing that malnutrition enhances individual susceptibility in infectious diseases by lowering the immunity.

The risk of spread of COVID-19 infection in rural areas is considerably high. This is due to a number of factors such as lack of health awareness, scarcity of clean water, paucity of nutrition, and after all, poorly-equipped and insufficient public health centers and blocks hospitals. Besides, essential health services apart from COVID-19, which consist of reproductive/maternal, new-born/child health, prevention and diagnosis of contagious diseases, treatment for chronic diseases, and other emergencies, are totally fall down in rural areas of India. The COVID-19 outbreak has placed a huge demand on our health service. Our health facilities and work force are currently overburdened by a surplus of activities associ-

ated with controlling the present pandemic. For this, there is a risk of unavailability of essential health services which people generally expect in their emergencies. It is fact that some of the local doctors are no more interested to provide consultation during this emergency period due to the fear of COVID-19 infection. Additionally, the rural hospitals put some high restriction on local non-COVID patients and they are not willing to admit the general patients easily, when required. In this circumstance, the treatment of severe diseases other than COVID-19 such as dengue, malaria, diarrhea, heart-failure, orthopedic disorder etc. are badly affected and sometimes mortality occurs due to improper management of health service. The pregnant patients are in a great danger or fear as they are restricted in their regular basis visit to the doctors and in their delivery time, there is neither good transportation service nor do they have good doctors available in hospitals or in locality.

One of the most remarkable images of the COVID-19 pandemic that has been seen during lockdown is the forcing millions of migrant workers to flood out of cities and back to their own villages. As a result, there would be a significant risk of community transmission in the different rural areas of India, if some of these workers have been carrying the corona virus. The unexpected announcement of the national lockdown in India resulted in the mass departure of migrant workers became a chaotic event throughout the country. But the social problem is that the permanent residences of the villages are now scared of those migrants due to the risk of infection. It is noticed that there was extreme violence with them in some of the rural places. Moreover, the migrants are the additional burdening of village economy as they are consuming the harvested crops whatever produced till the lockdown.

Let's have a look at the mental health of people in rural areas in this time. Now-a-days, we are experiencing emotions, thoughts, behaviors and situations that have never practiced

before. Although in the past centuries, we had some pandemic experiences like plague, Cholera, Spanish flu etc. However, the pandemic of COVID-19 comes in a completely different manner in human beings. It has traumatized the entire world and formed a global panic. The pandemic has substantial and erratic psychological impacts in each country. In India, both the urban and rural people are affected according to their individual circumstances. The rural people are passing their lives through a mixed emotions, fear of infection and uncertainty of earning money are the most common ones. Resulting depression, anxiety and stress catch across the ages, gender and professions. Moreover, social distancing enforces people to stay at home in most of the time, has also a negative effect that family quarrelsome occurred in many places. Basically, the mental peace gets hampered and they are becoming mental patients gradually.

Finally, we can say that a microorganism has shaken the whole life of this macroscopic world and totally change the nature of habitat of human beings. However, COVID-19 teaches us a lot of lessons. It teaches us how to stay home along with other person and hence the value of family-life. It teaches us how to maintain hygiene every time by washing hand, face frequently. It teaches us how to be self-dependent by cleaning garbage, washing clothes, cooking etc. It teaches us self-sustainability, value of survival and hence saves us a lot of money. It is well known to us that climate change is a biggest threat facing humanity over the long term but in this lockdown period a strong relationship between people and surrounding nature has established which has a beneficial outcome of promoting an eco-friendly environment led by a marked reduction of pollution levels. In spite of these, COVID-19 threat over mankind has been creating a big panic for the last several months and we have to overcome this at any cost. Therefore, we are waiting desperately to be freed from this pandemic, enabling us to resume living a healthy and happy life.

All Hopes to Muzzle a Modern Malady Pinned on Familiar Fixes

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Abstract

The SARS-CoV-2 virus emerged in December 2019 in Wuhan, China and then spread rapidly all over the world. Scientists are endeavouring to intensify research in order to find antivirals specific to the virus and vaccines to treat or prevent Covid-19. Now, for a medicative cure for COVID-19, several drugs such as chloroquine, hydroxychloroquine, lopinavir, ritonavir, remdesivir and favipiravir are currently undergoing clinical studies. Convalescent plasma therapy and high dose of intravenous (IV) vitamin C have also been used to treat SARS-Cov-2 infections. This article outlines aspects related to several antiviral drugs and therapies which may be potentially effective against SARS-CoV-2.

Keywords: Covid-19, SARS-CoV-2, chloroquine, hydroxy-chloroquine, lopinavir, ritonavir, remdesivir, favipiravir, vitamin C, convalescent plasma.

1. Humanity in Crisis

"Death leaves a heartache that no one can heal."
---Anonymous

For the past few months, the world has seen many people lose their near and dear ones. Probably, no one can understand another's pain unless one feels it in one's own life. Really, if one compares the situation of a few months earlier to that of today, it would seem as if one had fallen asleep in one world and has woken up in another. One has suddenly realised that religion, caste, beauty and money have no control over destiny. It is difficult to accept that kisses and

hugs have unexpectedly become weapons instead of being acts of love. Human beings are now imprisoned in an environment where uncertainty, unknown fear and misbelief pervade the air. As the COVID-19 (**Corona Virus Disease - 2019**) pandemic races across the globe, researchers from academic and government laboratories to small biotechnology companies and multinational pharmaceutical corporations are working hard to develop new techniques to understand the mechanism of infection, virulence, pharmacology and evaluate potential therapeutics and vaccines to combat against coronavirus.

Keeping all pains at bay, researchers all over the world are working hard to carry on their act against coronavirus so that everyone can get another chance to breathe oxygen from mother nature but not from a ventilator machine. Here, in this manuscript, the literature reports of a few important antiviral drugs will be showcased as probable treatments for SARS-CoV-2, though none of them can be accepted as indisputable remedies for the disease till date. In controlling the COVID-19, most of the drugs tested by the doctors so far are totally based on the information for similar kind of infections that occurred in the past and treatment is completely oriented towards the 'management' of symptoms.

2. Villainous acts of COVID-19 in human body

Coronaviruses (Corona: Crown like shape;) generally belong to a family of enveloped viruses with single-stranded, positive-sense RNA genomes infecting humans and animal species [1]. Graphical representation of structure of corona virus (SARS-CoV-2) has been given in Figure 1 and representative structure (Electron micrograph of infectious bronchitis virus) of coronaviruses (crown-like shape) has been given in Figure 2 [2]. Study reveals that coronaviruses are zoonotic. That means these viruses are mostly present in animals and then transmitted from animals to human beings. In this family of coronavirus members, those viruses which are responsible for the common cold are known as severe acute respiratory syndrome coronavirus (SARS) and Middle East respiratory syndrome-related coronavirus (MERS) [3]. However, the one that has recently emerged is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, the etiological agent of the Corona Virus Disease 2019 (COVID-19)). It was

provisionally named as 2019-nCoV (new corona virus was not identified in humans previously). Subsequently, International Committee on Taxonomy of Viruses chose a systematic nomenclature based on an analysis of the new coronavirus' evolutionary history and the pathogen that causes severe acute respiratory syndrome (SARS). On 11th of February 2020, they introduced the name as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). WHO declared the COVID-19 outbreak as the sixth public health emergency of international concern. Others are H1N1 (2009), Polio (2014), Ebola in West Africa (2014), Zika (2016) and Ebola in the Democratic Republic of Congo (2019) [3].

General symptoms of COVID-19 disease at the onset of illness are general myalgia, fever and cough. Often the symptoms are extended to production of sputum, headache and diarrhea [4,5]. SARS-CoV-2, like other coronaviruses, mainly infects the respiratory and gastrointestinal tract, pneumocytes, with a cell tropism of nasal epithelial cells and alveolar macrophages in the lung and enterocytes in the bowel [6,7]. Modern research indicates that binding of cell through viral S protein to the host receptor angiotensin-converting enzyme 2 (ACE2) is obligatory for the infection to occur [8,9]. After entering the cell, gradually the virus complex is translocated to the endosome. Endosomal acid proteases present in endosome then cleaves the S protein. Viral genome is then released and gets translated into the viral replicase polyproteins PP1a and PP1ab. Viral proteases are responsible for the breaking down of such polyproteins into functional proteins. Through discontinuous transcription, subgenomic templates for mRNA synthesis and translation of the viral structural proteins take place [10, 11]. Viral replication complex mediates viral genome

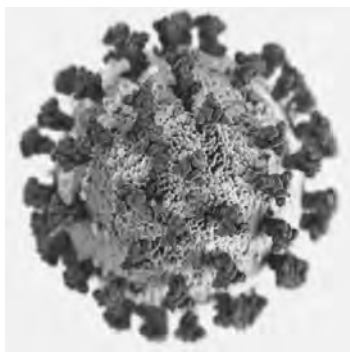


Figure 1. A graphical representation of structure of corona virus (SARS-CoV-2). Source: Centers for Disease Control and Prevention – Public Health Image Library. Credit: Alissa Eckert, MS, Dan Higgins, MAM.

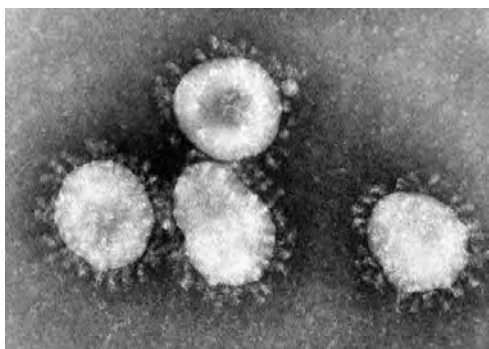


Figure 2: Representative structure (Electron micrograph of infectious bronchitis virus) of coronaviruses (crown-like shape). Source: Wikipedia/ CDC Credit: CDC/Dr. Fred Murphy.

replication and it includes an exonucleaseN, RNA-dependent RNA polymerase (RdRp), helicase and other accessory proteins. Viral nucleocapsids from the packaged viral genomes and translated viral structural proteins assemble at the endoplasmicreticulum-Golgi intermediate compartment. Subsequently, there is the release of infectious virions from the cell through exocytosis [9-11].

SARS-CoV-2 being a new disease does not have any clinically proven therapeutics. However, for the treatment of related viruses like SARS and MERS, a substantial preclinical research was reported. It is

worthwhile to mention that for the treatment of SARS and MERS, no therapeutic or vaccine designing schedules got completed as these outbreaks did not persist. Consequently, the concepts of drug repositioning and repurposing have received a substantial amount of consideration [10]. In this regard, Chloroquine, Hydroxychloroquine, Lopinavir, Ritonavir, Remdesivir and Favipiravir, have entered clinical trials to address the current SARS-CoV-2 pandemic (Figure 3).

3. Chloroquine and Hydroxychloroquine as possible remedies for COVID-19

While scientists all over the globe had been hell-bent on finding an antidote to the deadly disease caused by this microorganism, certain experts had zeroed in on Chloroquine and Hydroxychloroquine as possible remedies for this. Chloroquine is not a new name in the world of medicine. It is widely used as an anti-malarial drug with immunomodulatory effects, as a potential curative drug in the treatment of malaria and amebiasis. Chloroquine was found to inhibit the growth of SARS-CoV-2 in an in vitro study. Its sister compound, Hydroxychloroquine however, is a more suitable option for the treatment of malaria and autoimmune conditions because though it shares the same mechanism of action as Chloroquine, the intensity of its toxicity is far lower than that of its sister. Hydroxychloroquine was reported to have anti-SARS-CoV activity in vitro in the previous SARS outbreak [1-3]. It was therefore surmised that Hydroxychloroquine could be a reliable pharmacological agent for the treatment of COVID-19 infection [12]. Unfortunately, till date, there is no quantifiable proof to establish the veracity of Chloroquine and Hydroxychloroquine as treatment for SARS-CoV-2 infection. However, according

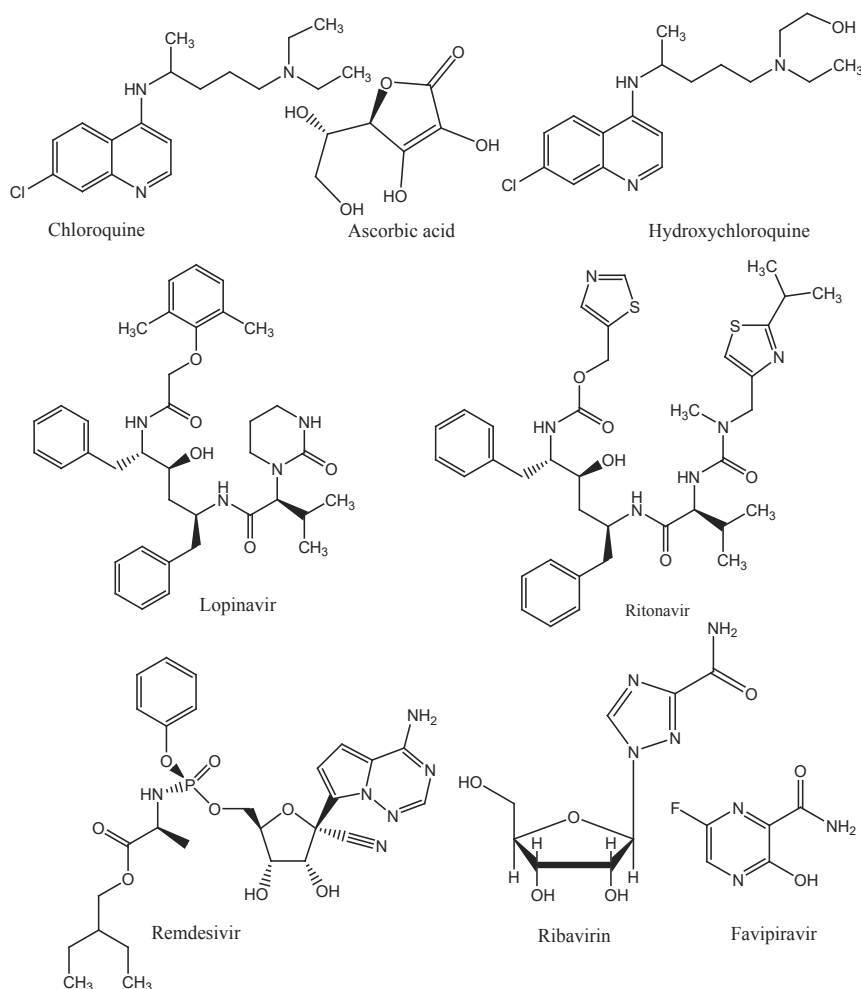


Figure 3: Representative structures of Chloroquine, Hydroxychloroquine, Lopinavir, Ritonavir, Remdesivir, Ribavirin and Favipiravir.

to research, both Chloroquine and Hydroxychloroquine have the potential to impede the growth of coronavirus through a series of steps [13, 14]. The changing of the pH at the surface of the cell membrane is the first effect that the drug has on the cell. It can subsequently inhibit viral entry, transport and post-entry events. In addition to this,

the compounds have the capacity to control replication of nucleic acid, virus assembly, new virus particle transport, glycosylation of viral proteins, virus release and other processes to achieve their antiviral effects. Inhibition of inflammation and autoimmune reactions can be facilitated with the help of their interactions with cells. They bind

to DNA and RNA intercalating between base pairs, thereby stabilizing nucleotides and inhibiting the prepolymerization and transcription necessary for cellular replication and normal protein synthesis. They also accumulate in lysosomes, stabilizing them and thereby interfering with chemotaxis, phagocytosis, autophagy and digestion [15, 16].

4. What about Lopinavir/Ritonavir (LPVr) treatment?

In 2003, after the emergence of SARS, screening of several drugs had been performed. Researchers observed after meticulous screening, Lopinavir, a human immunodeficiency virus (HIV) type 1 aspartate protease inhibitor, as having *in vitro* inhibitory activity against SARS-CoV [17]. Lopinavir is formulated in combination with another protease inhibitor, Ritonavir. Ritonavir, when combined with Lopinavir, increases its plasma half-life and this takes place through the inhibition of cytochrome P-450. Research indicated that the addition of Lopinavir–Ritonavir to Ribavirin (an antiviral medication used to treat RSV infection, hepatitis C and some viral haemorrhagic fevers) reduced the risk of acute respiratory distress syndrome [ARDS] [17,18]. This combinatorial medication was also capable of reducing viral load among patients with SARS. Again, Lopinavir found its application both *in vitro* and in an animal model, against MERS-CoV [1,4,16]. Reports suggested that the combination of Lopinavir/Ritonavir (LPVr) with Ribavirin and interferon alfa resulted in virologic clearance and survival. Researchers nowadays have tried the oral dose of LPVr for SARS-CoV-2 infection. SARS-CoV-2 virus, a single-stranded RNA beta-coronavirus, enters host cells and replicates, producing strands that contain

multiple copies of the viral genetic material (RNA). The strands of genetic material, accumulate at the periphery of the cell, ready to be cleaved, packaged and prepared for release from the host cell. The enzyme 3-chymotrypsin-like protease (3CLpro) plays a crucial role in processing the viral RNA. As LPVr is a protease inhibitor, it may inhibit the action of 3CLpro, thereby disrupting the process of viral replication and release from host cells [17, 19, 20].

5. Will Remdesivir work?

This is the question which is now plaguing the minds of common people. Remdesivir, one of the initial clinical candidates, was developed by Gilead Sciences in collaboration with the U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID). The development of Remdesivir was a part of an antiviral development project of Gilead Sciences in 2015 which was initially effective against Ebola virus (EBOV) [11]. Though Remdesivir was not developed for the treatment of COVID-19, now it is used to treat COVID-19 as among the candidate therapies. Remdesivir has demonstrated efficacy in both *in vitro* and *in vivo* models against coronaviruses [11, 21].

Remdesivir, which is basically a prodrug, gets metabolized within cells and then converts into an alanine metabolite. This, on further processing, gets converted into the monophosphate derivative followed by conversion into an active nucleoside triphosphate derivative which can be utilized by the viral RNA-dependent polymerases for genome replication. Now, viral RNA-dependent RNA polymerase (RdRP) enzyme can disintegrate nucleoside triphosphate into viral RNA and the action goes on [11, 22].

6. Can Favipiravir be a solution?

Favipiravir is another drug that has received significant attention as it is undergoing clinical trials in treating COVID-19 of late. In cells, it gets converted into an active phosphoribosylated form, Favipiravir-RTP (Favipiravir ribofuranosyl-5'-triphosphate). Consequently, recognized as a substrate by viral RNA polymerase therefore inhibiting the RNA polymerase activity. Favipiravir, a potential RNA-dependent RNA polymerase (RdRp) inhibitor of RNA viruses, also capable of inhibiting the replication of a large number of RNA viruses, including influenza A virus, flavi-, alpha-, filo-, bunya-, arena-, and noroviruses as well as west nile virus, yellow fever virus, foot-and-mouth-disease virus, ebola virus and lassa virus [23]. In this way, SARS-CoV-2 being an RNA virus, experiences the potential antiviral action of Favipiravir. Clinical trials for the treatment of COVID-19 have shown that Favipiravir has more potent antiviral action than that of Lopinavir/Ritonavir and adverse effects are also much lesser compared to Lopinavir/Ritonavir [24, 25].

7. A therapy 'used for over 100 years' has recently resurfaced

In the search for an effective treatment for COVID-19, some researchers and doctors are depending on an old method of fighting infectious diseases: transfusions with convalescent plasma. Convalescent plasma, the plasma from recovered patients has been used over 100 years to treat a wide array of diseases caused by measles, polio, chickenpox and SARS [26,27]. The notion of using convalescent plasma was initially introduced by physiologist Emil von Behring (Nobel Prize winner in Physiology or Medicine in 1901) and bacteriologist Kitasato Shibasaburo in the late 19th

century in order to fight against bacterial infection diphtheria. Since then, researchers and doctors have used passive antibody therapy, on and off, in order to treat or prevent both bacterial and viral infections.

Antibodies are found in plasma, a liquid component of blood. The blood of people who have recovered from COVID-19, contains antibodies which have been produced by their bodies to fight against the coronavirus. Most importantly, antibodies are the molecules that have learned to recognize and fight against the pathogens, such as viruses. In the present situation, doctors can separate antibody-containing plasma from a patient recovered from COVID-19 and administer it by transfusion to a patient who is suffering from COVID-19. In this way, the donor antibodies help the immune systems of the patient to reject the pathogen more efficiently and to fight the disease, in all possibility, by shortening the span and / or reducing the severity of the disease [28].

It is true that convalescent plasma treatment has been used for many years with varying success though the effectiveness for treating COVID-19 is not well known. These methods are known to have tasted success in China and many other countries but their reliability has become questionable due to absence of randomized and controlled studies. Moreover, the optimum time at which the plasma should be infused is also beyond the knowledge of researchers and doctors [29].

8. Can high-doses of vitamin C be used to treat patients with COVID-19?

As COVID-19 is now spreading across the world, researchers are seeking new ways through which people can be protected from the virus or at least find a medicine that can lessen its effects. One such trial is to test a high-dose of vitamin C in patients

with COVID-19 as COVID-19 pneumonia seems to be a lung injury caused by the hyperactivation of immune effector cells. Research reports have indicated that a few patients in China suffering from COVID-19 have been treated with a high dose of intravenous (IV) vitamin C anticipating speedy recovery since a high-dose vitamin C may result in immunosuppression at the level of these effectors [30].

The idea of using high dose of intravenous (IV) vitamin C is not at all new. Linus Pauling, the famous Nobel Prize-winning chemist, considered vitamin C almost as a panacea. Pauling had such a high regard for vitamin C that he considered that it can combat a series of illnesses including flu, cancer and many other diseases. Vitamin C, an essential enzymatic co-factor for synthesis of collagen, immunity boosting and for hormone production can also be considered as a significant anti-oxidant. In order to have vitamin C, human body should rely on dietary sources as humans are not able to synthesise vitamin C. The sodium-vitamin C co-transporters SVCT1 and SVCT2 transport the reduced form of vitamin C, ascorbic acid across cellular membranes. Besides this, vitamin C gets oxidised to biologically inactive dehydroascorbate both intracellularly and extracellularly which is quite unstable as it undergoes hydrolysis in an irreversible manner at physiological pH [31].

GSH (glutathione), thioredoxin, and NADPH (reduced nicotinamide adenine dinucleotide phosphate) can reduce dehydroascorbate to vitamin C. As a result of this, reactive oxygen species (ROS) scavenging systems involving redox couples such as NADPH/NADP⁺ and GSH/GSSG (glutathione disulfide) decrease. Consequently, generation of ROS increases inside the activated immune cells. Hence, a high-dose of vitamin C, unlike the general

assumption, acts as a pro-oxidant [32].

Sepsis is a life-threatening organ dysfunction syndrome, characterized by systemic inflammation, increased oxidative stress, insulin resistance and peripheral hypoxia [33]. Rolipram, a novel drug treatment for sepsis can inhibit TNF α production in activated macrophages as it is a selective phosphodiesterase-4 inhibitor, thereby restraining acute inflammatory response [34]. Similarly, a high-dose of vitamin C in sepsis treatment is most probably due to its immunosuppressive effects. Lung epithelial cells use mitochondrial oxidative phosphorylation procedure to produce ATP whereas, immune effector cells are dependent on glycolysis for their bioenergetic functions. This is responsible for the fact that high-doses of vitamin C treatment act as a prooxidant for immune cells whereas at the same time antioxidant for lung epithelial cells. Hence, intravenous high-doses of vitamin C could be safe and beneficial choice of treatment in the early stages of COVID-19 as beside the abovementioned functioning, vitamin C treatment also might protect innate immunity of ATII through the inhibition of the lactate secretion [35].

9. Our helplessness

As COVID-19 continues to kill thousands of peoples and bringing the economies to their knees, doctors, scientists and governments are on the lookout for safe and effective treatments to help those who are infected. However, the tragedy with COVID-19 is that there is no reliable medicine that can cure it yet. The above-mentioned drugs and medicative procedures are not foolproof. Let us hope that at least any one of them comes out to save the human race individually or in combination with other drugs.

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A Review on how Artificial Intelligence Played a Critical Role in this Pandemic (COVID-19)

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Abstract

COVID-19 (Coronavirus) pandemic has created surge demand for essential healthcare equipment, medicines along with the requirement for advance information technologies applications. Artificial intelligence (AI) has been applied in our daily lives in a numerous way. AI has also contributed to dealing with the coronavirus disease (COVID-19) pandemic, which is currently happening around the globe. This paper presents a survey of AI methods being used in various applications in the fight against the deadly COVID-19. AI as a decisive technology to analyze, prepare us for prevention and fight with COVID-19 (Coronavirus) and other pandemics.

Keywords: Artificial intelligence, COVID-19, pandemic, machine learning.

1. Introduction

The COVID-19 (Coronavirus) pandemic has brought a worldwide health crisis; the medical industry is continuously facing new challenges and is looking for newer technologies to monitor and control its spread. AI has emerged as a potential solution which can easily track the spread of the virus, identify the high-risk patients, and is useful in controlling the infection in real-time. It has also shown success in predicting mortality risk by adequately analyzing previous data of the patients. It has come up as a valuable technology to help us to fight the virus by population screening, arranging medical help, providing notifications, and suggestions about the infection control [1] and has the potential to improve the planning,

treatment and reported outcomes of the COVID-19 patient, being an evidence-based medical tool.

2. Background of AI used in earlier pandemics

In recent years, world has seen major cases of Influenza (Flu) outbreaks starting from H1N1 influenza virus, or 'Spanish Flu' that was reported in 1918 to the recent COVID-19 pandemic. Though detection times for respective virus types may vary greatly [2], [3]. It is evident that technological advancement is clearly aiding in reducing their detection time and facilitating in the development of treatment modules. In particular, advancements in computing capacity brought about by the emergence and widespread employment of such technologies like AI machine learning, Big

Data [4], [5] and Cloud Computing have allowed massive amounts of data from various sources to be captured and analyzed in real-time and from them insightful predictions can be made. Advancements in AI-based infectious disease-surveillance algorithms have led to early infectious disease detection. In this section an attempt has been made to put forward the role of AI in case of different pandemics. Many of the machine learning methods in addition to giving indications on size and location are also primarily used by mathematicians to estimate variables related to infection (e.g., incubation time, transmission mode, symptoms and resistances to treatments). The input data for epidemiological studies is rich and diverse and enabling to utilize various assets of AI. Epidemiological studies help us to predict an epidemic from very small foyers as shown in a recent work on Kyasanur forest disease which is a tick-borne viral infectious disease [6]. Using extremal optimization tuned neural network, the team of scientists showed the high prediction rate and proposed localization data to be implemented in future databases for better control transmission. Recently life-threatening outbreaks, such as Ebola, have provided innovation in the field of prediction. Using machine learning, a single-layer artificial neural network (ANN), logistic regression (LR), decision tree (DT), and SVM classifiers scientists generated an ensemble of predictors that could be applied to different combinations of Ebola-related data [7]. Autoregressive integrated moving average (ARIMA) model has been utilized by several teams from United States, China, New Zealand, and South Africa for predicting infectious diseases [8], [9]. The ARIMA model originally developed for economic applications has been put to use in other domains such as for infections that occur

in cyclic or repeating patterns. The ARIMA model has the capacity to integrate dynamic relationships and update the model based on recent events. Hence, ARIMA models have been widely used for epidemic time series forecasting including hemorrhagic fever, dengue fever, and tuberculosis. For other infectious diseases, seasonality is an important aspect [10]. A study conducted on Rift Valley Fever (RVF) which emerged in Africa and the Arabic peninsula, maximum entropy machine learning methods was used that had identified the key determinants associated with infectious risk. RVF is a vector borne viral zoonosis and the ML output which identified intermittent wetland, wild Bovidae richness, and sheep density as the main associations with landscape suitability for RVF outbreaks [11]. Following inoculation of the dengue virus by the mosquitoes, dengue haemorrhagic fever can occur (5% of cases). Applying SVM with the radial basis function (RBF) kernel, scientists could forecast the high morbidity rate and take precautions from preventing such cases to happen. The parameter that was able to reach a high level of accuracy was not linked to climate but to the infection rate of the mosquitoes that transmit dengue virus [12]. In most cases of infectious diseases the successful transmission blockade is usually linked to outreach [13].

3. Role of AI in COVID-19

A. General procedure of AI application

In a study done by Vaishya and colleagues they have presented a figure (Fig 1) which shows the general procedure of AI and non-AI based applications that help general physicians to identify the COVID-19 symptoms. According to the researches the flow diagram makes a comparative analysis of the flow of minimal non-AI treatment versus AI-based treatment and also explains the involvement and utilization of AI in the

significant steps of treatment and reduces complexity and time taken. It provides the physician with a variety of information about the disease and he not only focus on the treatment of the patient but also in the

control of the disease. The flowchart also shows that there is also a reduction in the number of steps in the whole process which makes it effective [14].

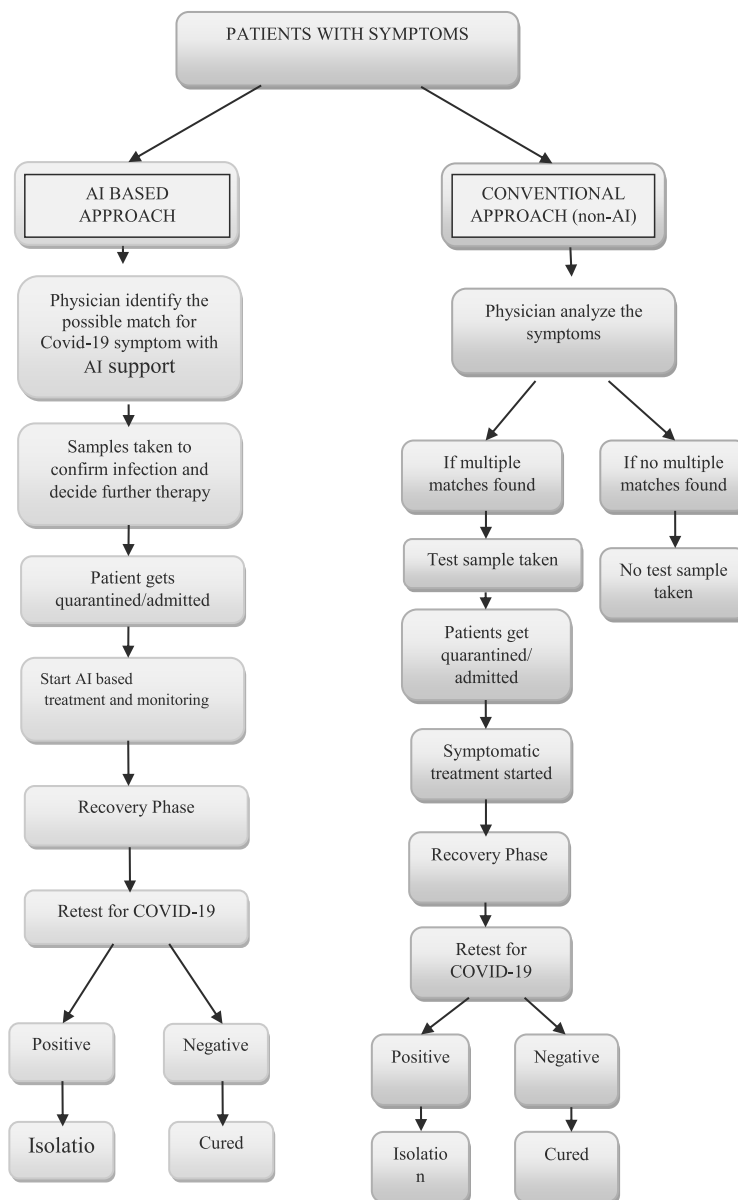


Fig. 1. General procedure of AI and non-AI based applications that help general physicians to identify the COVID-19 symptoms [15].

B. Application areas of AI

I) Disease surveillance through AI

COVID-19, being a highly infectious disease, surveillance is crucial. Human activity -especially migration- has been responsible for the spread of the virus around the world. Canada based BlueDot has leveraged machine learning and natural language processing to track, recognize, and report the spread of the virus quicker than the World Health Organization and the US Centre for Disease Control and Prevention (CDC). In the near and distant future, technology like this may be used to predict zoonotic infection risk to humans considering variables such as climate change and human activity. The combined analysis of personal, clinical, travel and social data including family history and lifestyle habits obtained from sources like social media would enable more accurate and precise predictions of individual risk profiles and healthcare results. While concerns may exist about the potential infringement to civil liberties of individuals, policy regulations that other AI applications have faced will ensure that this technology is used responsibly.

Surveillance and expert opinion have been traditional processes relied for the practice of monitoring infectious-diseases. Once surveillance data are collected, public-health officials together with subject-matter experts, try to design and implement appropriate measures to control infectious-disease outbreak. However, these actions require energy and time and are not always efficiently coordinated, but these cases require rapid decision making that can minimize morbidity and mortality. Modelling has come as a tool that fills the void in pre-emptive infectious-disease decision making with the use of available data to provide quantitative estimates

of outbreak trajectories. These models are created by public-health officials to intervene early and prevent the spread of an infectious-disease outbreak which are the two main vital things in case of an outbreak. Modelling is an attractive public-health tool because of its ability to estimate an outbreak's trajectory and the effects of possible control measures in a timely manner [16].

II) Diagnostic AI

Early detection and diagnosis of the disease is of primary importance in case of this pandemic. Immediate diagnosis means that response measures such as quarantine can be employed quickly to curb further spread of the infection. An impediment to rapid diagnosis is the relative shortage of clinical expertise required to interpret diagnostic results due to the volume of cases. Artificial intelligence (AI), an emerging technology in the field of medical imaging, has greatly contributed in fighting actively against COVID-19 [17]. In comparison to the traditional imaging workflow that heavily relies on human labours, AI enables more safe, accurate and efficient imaging solutions. AI can quickly analyse irregular symptoms and other 'red flags' and thus alarm the patient and the healthcare authorities helping to provide faster decision making, which is cost-effective. A 2D CNN model is proposed on manually delineated region patches to classify between COVID-19 and typical viral pneumonia. Chest CT images from 99 patients (i.e., 44 COVID-19 and 55 of typical viral pneumonia) are used. The testing dataset shows a total accuracy of 73.1%, along with a specificity of 67.0% and a sensitivity of 74.0% [18]. It has helped to develop a new diagnosis and management system for the COVID 19 cases, through useful algorithms.

Recent AI-empowered applications used in COVID-19 primarily include dedicated imaging platform, the lung and infection region segmentation, clinical assessment and diagnosis, as well as pioneering basic and clinical research. Moreover, many commercial products have been developed, which successfully integrate AI to combat COVID-19 and clearly demonstrate the capability of the technology [19]. AI has improved diagnostic time in the COVID-19 crisis through technology such as that developed by LinkingMed, a Beijing-based oncology data platform and medical data analysis company. Pneumonia, a common complication of COVID-19 infection, can now be diagnosed from analysis of a CT scan in less than sixty seconds with accuracy as high as 92% and a recall rate of 97% on test data sets. This was made possible by an open-source AI model that analyzed CT images and not only identified lesions but also quantified in terms of number, volume and proportion. This platform was powered by Paddle Paddle, Baidu's open-source deep learning platform. The Medical Imaging Computing Seminar (MICS) [20] China's leading alliance of medical imaging scholars and start-up companies, organized this first online seminar on COVID-19 on February 18, 2020, which attracted more than ten thousand of visits. These are the following areas where AI techniques have proven its merit in case of COVID-19 pandemic.

a) AI-empowered contactless imaging workflows

Healthcare practitioners in this time are particularly vulnerable concerning the high risk of viral exposure at workplace. Medical professionals, imaging specialists and technicians are of high priority, such that any potential contact with the virus could

be controlled. In addition to the personal protective equipment (PPE), dedicated imaging facilities and workflows, which are significantly important to reduce the risks and save lives maybe considered. Many modern X-ray and CT systems are equipped with cameras for patient monitoring purposes [21],[22],[23]. During the outbreak of COVID-19, those devices facilitated the implementation of a contactless scanning workflow. Using these technologies, technicians can monitor the patients from the control room through a live video stream from the camera. However, only the overhead view of the camera will still be a challenge for the technician to determine scanning parameters such as scan range. In this case, AI is able to automate the process [23], [24] by identifying the pose and shape of the patient from the data acquired with visual sensors such as RGB, Time-of-Flight (TOF) pressure imaging or thermal (FIR) cameras [25]. Thus, the optimal scanning parameters can be determined. Wang *et al.* [26] have demonstrated that such automated workflow can significantly improve scanning efficiency and reduce unnecessary radiation exposure.

b) AI-aided image segmentation and its applications.

Segmentation is an important step in image processing and analysis for assessment and quantification of COVID-19. It delineates the regions of interest (ROIs), e.g., lung, lobes, bronchopulmonary segments, and infected regions or lesions, in the chest X-ray or CT images. Segmented regions then could be further used to extract self-learned or improvised features for diagnosis and other applications. This subsection would summarize the related segmentation works in COVID-19 and their applications. CT delivers high-quality 3D

images for detecting COVID-19. For the purpose of segmenting ROIs in CT, deep learning methods are widely used. Popular segmentation networks for COVID-19 include classic U-Net, UNet++, VB-Net [27]. Compared to CT, X-ray is more easily accessible throughout the world but due to the ribs projected onto soft tissues in 2D and thus confounding image contrast, segmentation of X-ray images is even more challenging. Currently, there is no method developed for segmenting X-ray images for COVID-19. However, Gaa *et al.* has adopted an Attention-U-Net for lung segmentation in X-ray images for pneumonia. For example, use U-Net for lung segmentation in a multi-centre study for distinguishing COVID-19 from community-acquired pneumonia on Chest CT. Jin *et al.* propose an AI system for fast COVID-19 diagnosis [28]. The input to the classification model is the CT slices that have been segmented by a segmentation network.

c) AI-assisted differential diagnosis of covid-19

As the pandemic is rising, in the outbreak areas the patients suspected of COVID-19 are in urgent need of diagnosis and proper treatment. Due to fast acquisition, X-ray and CT scans are widely performed as a basis to provide evidences for radiologists. However, medical images, especially chest CT, contain hundreds of slices, which take a long time for the specialists to diagnose. Also, COVID-19 is a new disease but has similar manifestations with various other types of pneumonia, and so requires radiologists to accumulate many experiences for achieving such a high diagnostic performance. Thus, AI-assisted diagnosis using medical images is the need of the day. In addition to segmentation focus is on the methods that could take advantage of those segmentation results into the diagnosis. Chen predicts the

final label (COVID-19 or non- COVID-19) based on the appearance of segmented lesions, which is obtained from a UNet++ based segmentation model. They employ chest CT images of 51 COVID-19 patients and 55 patients with other diseases. In an additional dataset including 16 viral pneumonia and 11 non-pneumonia patients, the proposed model could identify all the viral pneumonia patients and 9 of non-pneumonia patients. The reading time of radiologists is shortened by 65% with the help of AI results [29].

D) Curative research with the help of AI: Development of drugs and vaccines

Part of what has troubled the scientific community is the absence of a definitive cure for the virus. AI can potentially be a game changer as companies such as the British startup, Exscientia, has shown, early in 2020 they became the first company to present an AI designed drug molecule that has gone to human trials. A year is all it took the algorithm to develop the molecular structure compared with the five-year average time that it takes traditional research methods. In the same vein, AI can lead the charge for the development of antibodies and vaccines for the novel coronavirus, either entirely designed from scratch or through drug repurposing. For instance, using its AlphaFold system, Google's AI company, DeepMind, is creating structure models of proteins that have been linked with the virus in a bid to aid the science world's comprehension of the virus. Beck *et al.* (2020) who report results from using Machine Learning to identify that an existing drug, *atazanavir*, could potentially be repurposed to treat COVID-19, and Stebbing *et al.* (2020), who identified *Baricitinib*, used to treat rheumatoid arthritis and myelofibrosis, as a potential treatment for COVID-19 [30],[31].

II) Monitoring and formulating treatment and prognosis

AI here can develop an intelligent and potential platform for monitoring and predicting the spread of the virus. A neural network can also be developed to extract the visual features of this disease, and this would help in proper monitoring and treatment of the affected individuals [30],[31],[32]. It has shown its merit by providing day-to-day updates of the patients and also to provide solutions to be followed in COVID-19 pandemic. Also given that not all people diagnosed with COVID-19 will need intensive care, the ability to be able to forecast the people who will be affected more severely can help in targeting assistance and planning medical resource allocation and utilization. Yan et al. (2020) used Machine Learning to develop a *prognostic prediction algorithm* to predict the mortality risk of a person that has been infected, using data from only 29 patients at Tongji Hospital in Wuhan, China [33],[34] developed an AI that can predict with 80% accuracy which person affected with COVID-19 may go on to develop acute respiratory distress syndrome (ARDS) although the sample that they used to train their AI system is, however, small (only 53 patients) and restricted to two Chinese hospitals.

III) Virtual assistant to decrease the load on call centres

Due to the massive rise in the number of patients during COVID-19, emergency and medical services around the globe have seen an increase in call volume from people showing symptoms of coronavirus. As customer representatives and social workers are increasingly ordered to work from home, companies and countries are turning to AI to bridge the resulting gaps

in service. AI helped in early diagnosis and providing treatment at an early stage using digital approaches and decision science, which offered the best training to students and doctors regarding this new disease. After realizing that many people were asking the same general questions, implementing virtual assistant seemed to be the solution. Copenhagen used a virtual assistant bot to screen people for coronavirus; the bot answered 30,000 calls on its first day of work. This frees up healthcare professionals from the need to respond to inquiries and focus their time on providing care to patients. Microsoft Healthcare Bot provides self-service symptom checker with its language understanding models tuned to understand medical and clinical terminology. This self-assessment bot is critical to provide solutions that can help patients and clinical teams in the fight against this global health crisis [35]. AI can impact future patient care and address more potential challenges which reduce the workload of the doctors.

IV) Social Control

An important role for AI in fighting the COVID-19 pandemic is social control. AI has been utilized in managing the pandemic by using thermal imaging to scan public spaces and identification of people potentially infected, and by enforcing social distancing and lockdown measures [36]. For example, as described by Chun "At airports and train stations across China, infrared cameras are used to scan crowds for high temperatures [37]. They are sometimes used with a facial recognition system, which can pinpoint the individual with a high temperature and whether he or she is wearing a surgical mask." It is reported that these cameras can scan 200 persons per minute and will recognize those whose body temperature exceeds 37.3° [38]. Thermal imaging has,

however, been criticized as being inadequate to identify from a distance a fever in people who are wearing glasses (because scanning the inner tear duct gives the most reliable indication) and because it cannot identify whether a person's temperature is raised because of COVID-19 or some other reason [39]. A USA computer vision-based start-up is already offering "social distancing detection" software, which uses camera images to detect when social distancing norms are breached, after which it will send out a warning [40]. At the time of writing, most advanced economies have been considering and/or testing various contact tracing apps and related tools to provide social control.

V) Use of intelligent drones and robots

The public deployment of drones and robots to broadcast information to larger audiences and also disinfect public spaces is an essential step. Micro-Multi-Copter, a Shenzhen-based technology company, has helped to lessen the virus transmission risk involved with city-wide transport of medical samples and quarantine materials through the deployment of their drones. Patient care, without risk to healthcare workers, has also benefited as robots are used for food and medication delivery. The role of room cleaning and sterilization of isolation wards has also been filled by robots. Catering-industry centred Pudu Technology has extended their reach to the healthcare sector by deploying their robots in over 40 hospitals for these purposes. Danish company UVD Robots shipped robots to Chinese hospitals to disinfect rooms, and when fully deployed, the robots will operate in all Chinese provinces. These robots emit an ultraviolet light throughout an area to kill viruses and bacteria without exposing any human personnel to infection.

VI) Prevention and identifying at-risk individuals:

With real-time data analysis, AI can provide updated information which is helpful in the prevention of this disease. It can be used to predict the probable sites of infection, the influx of the virus, need for beds and healthcare professionals during this crisis. Prediction of probable sites of infection will provide better management strategies to be formulated beforehand in those areas. AI helps in identifying traits, causes and reasons for the spread of infection which can help in identifying at-risk population. One of Israel's largest health maintenance organizations is using artificial intelligence to help identify which of the 2.4 million people it covers are most at risk of severe covid-19 complications. Maccabi Healthcare Services says the system—which it developed with AI company Medial Early Sign—has already flagged 2% of its members, amounting to around 40,000 people. Once identified, individuals are put on a fast track for testing. The AI was adapted from an existing system, trained to identify people most at risk from the flu, using millions of records from Maccabi, going back 27 years. To make its predictions, the system draws on a range of medical data, including a person's age, BMI, health conditions such as heart disease or diabetes, and previous history of hospital admissions. The AI can trawl through a vast number of records and spot at-risk individuals who might have been missed otherwise. Maccabi also uses the AI to help determine the level of treatment the people it flags might require if they fall sick—whether they should be cared for at home, put up in a quarantine hotel, or admitted to hospital. The organization says it is now talking to major US health providers that are interested in using the AI to fast-track their own high-risk patients [41]. In future,

this will become an important technology to fight against the other epidemics and pandemics. It can provide a preventive measure and fight against many other diseases. In future, AI will play a vital role in providing more predictive and preventive healthcare.

Conclusions and future perspectives

As John F. Kennedy had said “When written in Chinese, the word ‘crisis’ is composed of two characters. One represents danger and the other represents opportunity.”

In every crisis lies an opportunity, we have to harness this opportunity so that we can progress as a human race. This crisis would lead us to innovative ways to apply and to advance artificial intelligence. The utilization of AI has in fact shown a very promising future with its utility in identifying early infections due to coronavirus and also in monitoring the condition of the infected patients. It played a significant role in improving treatment consistency and decision making by developing useful algorithms. Not only in the treatment of COVID-19 infected patients but AI also provides assistance for their proper health monitoring. AI helps in tracking the crisis of COVID-19 at different levels such as medical, molecular and epidemiological applications and facilitating research on this virus by analysing available data. AI can help in developing proper treatment regimens, prevention strategies and drug and vaccine development. However, there are a few issues need to be looked for the full integration of AI in our daily health-care lives, such as development and implementation of guidelines by regulatory institutions such as Food and Drug Administration to help in AI integration. Another thing of importance is harmonizing AI approaches across institutions AI

which will enable us to enforce its use for infectious pandemics prediction, better understanding of infections, and reduce time for drug discovery. In case of developing countries access to medication is still a financial limitation, but AI can be used to break transmission of the pandemic. Coordination is also required in case of Bio-surveillance, taking advantage of the rapid progress made in the past decades in data processing, analytics, and utilization. Architecting data is an essential part which should be defined upstream to enable data sharing, merging, and analysis. With increase in product exchanges and travels the risks for dissemination of infectious diseases could not be handled or reduced unless strategic decisions are made at the global level regarding implementation of big data architectures and their integration for AI-driven solutions.

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Together at Home Concert: An Analysis of Home and the World as Performance Spaces in the Time of Worldwide Covid 19 Pandemic

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On April 2, 2020, television monitoring agency BARC along with Nielsen reported an unprecedented spike in TV viewership across India during the first week of the lockdown between 21st and 27th March. The total viewership crossed 1.2 trillion. The rise was evident in both the total number of viewership and the average screen-time spent. While viewership rose from 62 million during the pre-Covid week between January 11 and January 31; the average time spent per viewer rose from 3 hours 46 minutes to 4 hours 49 minutes per week. It was also reported that number of channels were being switched. Based on generic category, there was a rise in news and movie viewership and a remarkable shrink in serials. (The Economic Times April 02, 2020) The Covid time restored the TV firmly in the midst of the household at a time of lockdown. The reasons for this restoration are many, exploring all of which would place an improbable methodological and epistemological claim on a single article or line of enquiry. However, an overview of the various roles that TV has played during the lockdown, which has challenged some certain long standing assumptions about the role of media in society simultaneously

consolidating many, will be attempted in this article. Additionally, it will interrogate the role that televised media events have played during the lockdown in redefining the traditional binary of home and the outside world as spaces of performance.

For a long time, television was considered to be on the margin of cultural studies. Most early studies were confined in making cultural and social analysis of the programs broadcast following the traditional mores of textual analysis. (Dayan 18) In critical circles, the TV was considered as a washed down diluted icon at the midst of domesticity. Its appeal and cultural significance was intrinsically linked to the growth of the nuclear family with the accumulation of the industrial capital in the cities. The history of Indian television follows a pattern similar to the sociological paradigms of the West as explored in the above mentioned texts. Although it was introduced to India in the late 1950s, it was only in the late 70s with the establishment of Prasar Bharati and the broadcast of programs tailor made for family viewing that television grew in popularity. This popularity was not singularly tractable to the contents of the programs. As an object occupying an important place in

the domestic space, it came to be imbued with a semiotic function integrally linked with middle class family values. Studies of the American television have linked the popularity of the television at the turn of the 20th century to the maintenance of residual Victorian ethics maintained by the industrially occupied people who survived the shift from an earlier agrarian economy. (Spigel 11) It was the medium par excellence of the post-industrial 20th century milieu. Here a distinction needs to be made between other modes of mass entertainment like gramophone records and cinema. The distinctions between cinema and television are numerous in terms of production, materiality, *skopos* and reception. However, the distinction that we will stress here is that cinema typically presents the world outside. One has to move out of the domestic confines to see it, and that gives rise to a gamut of related significations. Secondly, cinema is guided by the logic of material reproduction. The same film is played again and again, and popularity dictates its run time. In television, program categories are repeated but the programs themselves are not. (Repeat shows are fairly new developments in the television business largely to cater to the 24 hours compulsive run time and guided by the audience monitoring system commonly referred to as TRP). Gramophone is somewhere between the two. It occupies the domestic space, is imbued with the spatial semiotic economy of domestic ideology but the content itself is guided by the user's choice. The user, so to say, has a chance to choose from a wide gamut of products what he or she wants to listen to or use as an entertainment mode within the domestic space. Television takes away that choice, and essentially, dictates the choice by creating the choice.

What happened to the US at the turn of the century was witnessed in India from

the 1950s onwards, post-independence. The postcolonial economic policies of the Nehru government espoused a preference towards heavy industrialization, essentially mediating the country's shift from a primarily rural agrarian economy towards one with an equal and often more stress on industrial economy. Maheswari states As a Chairman of the National Planning Committee in 1938 Nehru's plan was to lay down a comprehensive plan for the industrialization of the country, which after Independence he not only carried out but exceeded to an extent that S. Gopal termed the original Planning Committee plan a 'mere torso'. (Maheswari 24) The results were clearly seen, among other things, in the shift in the demography of the Indian family structure. Singh observes that "With further industrial development, rural to urban migration, nuclearization of families, divorce rates, and the proportion of single member household are likely to increase steadily on the lines of the industrial West." (Singh 3) The urban middle class that was emerging from the middle of the 19th century onwards, severing first tentatively but then vehemently, their rural ties were creating a new sense of ideology that had the home at the centre of its activity and performance and the family as the performative space of that ideology. As the same middle class elite assumed power after independence, the same ideological bias continued, and the steady flow towards urbanity from the rural centers became an order of the day. This gave rise to the new home. The transition was from Joint to Extended to Nuclear families, which also meant a steadily decreasing age for familial authority. (Singh 5)

In the earlier agrarian economy, the farm land due to its physical vicinity to the home was seen as a part of the home. The distinction between the professional

and the domestic was unclear both at the outset and the inside. The home itself had an official and a domestic section on the inside; at the outset the land, the village and the home was seen as an unity. However, with the growth of the modern home, the bifurcation between the home and the world became complete. Corbusier, for example, considered homes primarily as dwelling machines, and must thus be guided by the same ideas of utility and efficiency as is seen in the industrial milieu in which he developed his architectural ideals. Thus of all the different connotation that home carried (which we shall shortly see in some detail), the most significant was the differentiation between the work space and the home space. That these distinctions were informed by gender and class ideologies is something we will consider, but before that it is time we consider home as it has appeared to us in its many definitions at the present time of the Covid 19 lockdown.

How many homes?

#SafetyatHome, home isolation, home quarantine, homeless vagrants, migrants returning (home, presumably) – the plethora of associations related to home has multiplied manifold during the period of the lockdown. Middle March, somewhat ironically, has become a point of departure for a desperate dragging of the humble home at the centre of discourse from its powerful and silent shy existence at the very margin of humanity and humanities. From being the space of repose, it has become or has been forced to become the space of performance. Used to quiet seclusion, it has certainly been called to task to prove itself as a paragon of inclusion. The reason apparently is simple, never before has humankind been forced to stay for so long at home, therefore never before has its many layers of significations been interrogated so

closely, and so aggressively reworked and re/presented.

Philosopher Arindam Chakraborty scans across a wide gamut of interdisciplinary materials from architecture to philosophy, literature and aesthetics, as well as law and metaphysics to provide us with eleven characteristics that an entity must have to be designated a home. It is not necessary that all these characteristics must be always present for any space at any time but at least one or a combination of these characteristics must be present. We can draw on some of them to elucidate our understanding of home. First and foremost, home is a shelter. It is a place that provides safety from all that lies 'outside' that is potentially harmful to us like weather extremities, wild animals, thieves and robbers etc. It is this seminal role of the home that has been highlighted in the entire lockdown period which has adopted a protective strategy. It has been effectively declared that staying at home is the most effective way to avert Covid 19 infection. Mankind must stay at home, since the danger lies 'outside'. But this is presented by another presumption which is not stated but always tacitly believed in, which is that to stay at home one must have a home. This leads us to the second characteristic of a home. It is a space bound by wall that the state apparatus agrees to belong to the possessor. It is not only a safe space; it is a space that is legally sanctioned. The bias of the government for this sanction is clear by the way a 'permanent address' continues to be an absolute necessity in all official work even to this day. Structurally, this is the home one reaches to. The long and tragic marches of the migrant laborers from across the length and breadth of the country often resulting in grave tragedies shows how the second characteristic has been present unacknowledged behind the first characteristic, but became explicit only

after the first came to be applied. Thus, home gathers a new definition, it is not only a space where one stays and which one legally inhabits, it is also the place that one yearns for, tries to reach in order to gain that safety and security (social and legal). Stay at home, as a prescriptive measure, is both a stasis and movement, depending on where one is in relation to that space.

The state's bias towards a locative fixity of home is understandable keeping in mind the opportunity for monitoring and vigilance that it presents. In his address to the nation on the eve of 14th April 2020, Prime Minister Narendra Modi congratulated the Indian citizens for being as disciplined as regimented soldiers in the first lockdown period that extended for twenty one days. This, along with the multiple allusions to the epic wars and past periods of warfare in most broadcasts, rendered a military rhetoric in which the home became the unlikely battleground. Invocation of war rhetoric became rampant in the lockdown period across the globe. It was a 'fight against corona' with the help of 'corona warriors' who were performing at the 'ground zero'. Israeli Prime Minister Benjamin Netanyahu actually employed military intelligence technology to fight the disease. However, almost imperceptibly a semiotic shift happened. This was inevitable since the only sign that the virus could give and we could understand was an embodied sign. The only way to isolate the virus was to isolate the people with the virus. With a rhetoric which was only thinly veiled as violence against the virus, it carried the possibility of violence against the victim. The rhetoric of contamination slid from micro-organism life to the human life, and it also moved from individual life to community life. This was heightened by the fact that the battle line itself was thin. Anyone, at any given moment, had the potentiality to

move from one side of the line to another. The regimented soldier who was fighting the battle could become a subject of attack by the same regimentation at any given time. It was inevitable that violence would erupt and the government had to take measures to set it right through a number of symbolic acts, and finally through direct telecasts that told people to be patient with infected patients and corona 'warriors'.

The question of embodiment, connected with the metaphysics of the 'home', takes us to the next level where home is the body. The body as the home of the self is as significant and established in narrative tradition as the physical home space. Thus, it is not surprising to discover the semiotic transference of the one to the other. The integrity of the body is ensured by the integrity of the home. Since the virus can enter the body through certain orifices, similarly the home space needs to be protected from all points of entry. The masked face is the semiotic recreation of the closed door. The door that is made to disallow going out is also made to disallow coming in, just as the sealed national boundaries are recreating semiotically the sealed body. If we move beyond the two above characteristics of home, we come to the most loaded description of home, which occurs neither in the physical nor in the metaphysical space, but in the epistemological negotiation between the two. At the outset, home is the space for sleep, for carrying out regular biological activities and maintenance of hygiene. It is also the place for experimenting with the self. It is where we learn, construct, reconstruct and deconstruct ourselves. It is place where we, as 'social' beings, enjoy the luxury of socially distancing ourselves from the world. However, all these aspects have a *telos* to it. We prepare at home before presenting to the world outside.

Our appreciation comes necessarily from the world, even after all the groundwork has been carried out at home. Thus, we come to another significant moment of semiotic transference. Just as the self is defined by the other, the home is defined by the outside. Just as the 'danger outside' make the 'inside safe', the public space outside defines the private space inside. To problematise matters further, the private space may not be a safe place. Hannah Arendt shows how private is derived from 'privation', from denial and injustice, and the most common objects of 'deprivation' as Aristotle points out in ancient Greece, were the women, the children and the slaves. From this distinction, the private space become a feminized space and the public a masculine one. And, since the deprivation occurs within the 'private' space, it seems obvious that the most atrocious abuse on these constituencies are perpetrated within the confines of the home. (Arendt 224) Secondly, Said points out in his gripping analysis of Jane Austen's *Mansfield Park* that every harmonious home exists only to the extent that labour involvement is being carried out somewhere outside that space to sustain the harmony. (Said 73)

It is important to take into stock all these aspects because there is another aspect without which all the above characteristics are incomplete. The home must have door, and the door is as much a space to leave as for one to arrive. Chakraborty, echoing Derrida's ethic of hospitality, states that even after all kinds of problematizations that turns the space of home as an owned private space into a precarious metaphysical space, its possession is important because it is where we receive guests. If not for anything else, at least to receive those who come, this structure needs to be maintained with detachment. This liminal space of door gives meaning to both the inside 'home' and

the outside 'world'. The significance of the lockdown is that this door is being forcibly closed. I argue, that with the shutting down of the home door during the lockdown, it is the television which replaces the door as a virtual door in front of which, we perform as we would perform outside in the world. It becomes our mediation, through which the domestic performative space is turned into a world stage. This is possible because it becomes a simulation, through which the world outside reaches the home space.

Television: The Door of Perception

It was Newcomb, who in 1976 first categorized television programs systematically, analyzing programs in each category and generalized about what they had in common. He discovered after his analysis that the television, irrespective of what it inherited from other forms of popular media, imposed an element of 'familism' on them. Whatever be the form presented, it was domesticated by television as if to attune the medium as a whole to the nuclear family, television's original viewing group. Although seminal, the work yet accorded to television a kind of seamless supertext, approaching viewing experience 'not in terms of discrete programs but in terms of the patterned sequences of stimuli'. (Dayan 18) Media Events 18) Although such a pattern can be imposed on television programs, there is one genre which is at least unique to the television, these are media events. Every nation has them and they are not difficult to find. These are events that are interruptions of routine that intervene in the normal flow of broadcasting and our lives. All normal broadcasts are preempted, there are special announcements to the event, and the events themselves are monopolized. All channels switch from their regularly scheduled program in order to turn to the great event, and are generally used for

dramatic announcements. Moreover, the happening is live. In the time of Covid-19, this reached a new height of engagement. In fact, these media events have become the focal point of crisis management. The lockdown was announced, initially extended, its success congratulated and extended through media events. The nation was directed to undertake solidarity exhibiting acts through such events, which in themselves became self-referential. In his third speech the Prime minister Narendra Modi referred to his previous speech and presented his success to the unity that was vouchsafed in the previous ones. Interestingly, after the second phase of the lockdown, the rest were routine extensions announced through public bulletins and *not* through media events. One of the key aspects of the success of media events is that they must not be unduly repeated.

The reason was because there were too many media events, which is because the very structural meaning of media events changed somewhat during the lockdown. In normal course of life, the media event is a break from routine. In a life that has already been a departure from normalcy; media event has been a restoration of normalcy. Every speech was laced with a hope of normalcy. More importantly, the entire living experience was engineered as an extension of the event. A notable feature of media event broadcasts is the reverence and ceremony with which it is presented. Even when analyzed, the generally aggressively critical journalistic stance is kept at bay for a more reverential understanding.

Some of the major media events in the history of television broadcast are royal weddings, funerals, the Pope's visit to Israel, and finally musical benefit concerts. All these trends started in the 1980s, and the epitome were the Live Aid Concerts and the We are the World Concert for

Somalia victims. Later on, many such televised media events appeared on TV. The resounding success of this format was traceable to its amalgamation of two forms of public entertainment. It was primarily a concert - it had in its ambit the performance parameters that are associated with rock shows and benefit concerts. At the same time, they were televised live to generate as much help as possible. The large amount of money that was accumulated at the time of the Live Aid concert was a fair testimony of the scope and popularity of such televised live media events.

Amidst widespread anxiety and a plummeting world economy that was suddenly in need of resources in sectors it did not anticipate, the media event format was thought upon the best option. The steady rise in television viewership was already noted with hope and interest. Answering to the most obvious call, on 18th April, 2020, in the midst of the Covid 19 pandemic reaching the height of its virility in the US after causing large scale death and panic in Iran and Italy after China where the outbreak was first recorded, the Global Citizen in collaboration with WHO televised the #SafetyatHome concert to garner moral, and more importantly, financial support to support doctors, nurses and paramedics who were directly in the frontline in tackling the outbreak. At the same time, it was also meant towards providing home to the homeless, and support to other disadvantaged group. Albeit the irony of US blaming the WHO for its incapacity to contain the pandemic a few days earlier and walking out of its financial support to the same organization days later was not lost on most!

The safety at home concert has been dubbed as in a tongue and cheek way as a Living Room Live Aid. The very moniker expresses the change in the way home is

being viewed – from a retreat it is being expected to turn itself into a space for performance. There is a structural problem at stake over here. The mega concert events for global benefits was organized as a semiotic mimicking in the most sublime sense, where the enormity of one matched the enormity of the other. The mass of humanity swaying as one to a musical performance was the everlasting visual impact the Live Aid generated. While swaying together they were responding to a crisis. The crisis outside was challenged by people who left the safety of their homes to come and dare it – again, outside. One validated the other. The concert was, and had to be, outdoor. There were no two ways about it. The biggest challenge of the present concert was to turn the entire semiotic response indoor. this could be possible only after making the living room itself a performative space that is convincing enough to replace the performance space outside. If the earlier benefits succeeded by bringing people together, by approximating psychological and motivational togetherness through the most obvious projection of physical togetherness, then this one had to carry that out without the physical aspect. People had to vouch for togetherness by staying, as a precondition, physically distant.

The program was a mixed success. There is no chance that it will gain the iconic status of the Live Aid concert or the Concert for Bangladesh. But it has raised considerable funds. But its cultural impact was limited. The reasons for that may be many, by I would consider for this article, given the tenor that it follows, is its uniquely deconstructive feature. In presenting the home into a replacement for outdoor performance spaces, it has established its impossibility. In its attempt to disrupt the boundaries, it has established it with its entire cultural

and metaphysical economies. Despite a few takeaways, it has showed us that it is always the Home *and* the World, never *is*.

Together at Home

The history of music and benefit concerts must be old. However, it is in from the late 17th Century in London that they became all a rage. The first, by all accounts, was held on 28th May 1697 when a ‘concert for the benefit of the composer’ (unnamed) was given at Lambeth Wells. That was just the beginning. (Rawson 61) The 18th century saw a slew of them that raised substantial sums for the beneficiaries. Frederic Handel’s annual performances for the Messiah to raise money for an orphans’ charity in London is well known, but not the first of its kind by a long shot. Earliest benefit concerts were theatrical, and nobody was sure what the format of benefit musical show should be like.

The rich and scope of benefit concerts multiplied manifold when they turned simultaneously into live televised event. And the pinnacle of this new format was the Live Aid Concert. It is important to mention Live Aid among many such concerts not only because of its enormity and impact, but because of its semiotic similarity with the Together at Home benefit concert during the Lockdown that we are going to discuss now. The benefit concert has been in many ways been directly compared to the earlier one as an antecedent. NME called it a ‘lockdown Live Aid’ and

The Live Aid was a live concert to raise money for people starving in Ethiopia, where a drought had created widespread famine. But every beginning has a beginning, and this was not the first time rockstars were rallying forces to raise money for beneficiaries. George Harrison and Ravi Shankar joined hands to create the ‘concert for Bangladesh’ in 1972. Clearly, it was new

beginning, because it was not through the concert that the money was raised but by the sale of records of those concerts. In 1985, Michael Jackson responded to the famine in Ethiopia by writing 'We are the World' and roping in frontline rock performers of the time to collaborate and sing together. Interestingly, the performance was broadcast worldwide at the same time by coordinating five thousand jockeys from across the globe. It was definitely a great new possibility, which Irish rock musician Bob Geldof was quick to spot, and organized the International Live Aid program on July 13th, 1985 along with Midge Ure. That it raised record money for the Ethiopian benefit is there for the records, but it is not for that the concert is being considered as an antecedent to the present concert. It is because of its optimal usage of the technology of its time. It exploited the new technology of cable satellite broadcasting by coordinating concerts in Philadelphia and London to broadcast the program worldwide. (Brill 112) The tone for the 1980s was set. Satellite technology would now be the norm to turn local benefit events into worldwide media events. Television would become more than a friendly member of a domestic corner to turn into a force to reckon with. And that would be with the rise of a new television genre – live media events that we have discussed already. Media benefit events became the norm of the 1980s, for example five months after the Live Aid concert, the Farm Aid concert was held for American farmers. The new media age has well in truly arrived. From the middle of the 1980s, it was the ultimate representation of the age, which according to McLuhan:

The One World: Together at Home was televised on 18th April simultaneously in a number of global media channels, as well as through a web based telecast. The program was divided over two days – a first

day six hour long preview and the actual concert which was about three hours long. Curated by Lady Gaga and organized by Global Citizen with WHO roped in as a stakeholders, the concert in scale was like nothing ever before. There were a 100 musicians participating. The actual benefit raised by the concert is commendable, but as far as the semiotic understanding of the concert, the confusion regarding the actual status of the performative stage was clear in its content. And mostly, the confusion was regarding the way is to be presented. The artists, like everyone else knew, that for the first time, the home is being placed in a semiotically liminal space. It is staying in its domestic construct, but is at the same time becoming public, as it is being aired to millions across the world. Thus, for a few minutes at least, the home is going to approximately a live concert stage. The oppositions had to be brought together. The conceit was ominous, almost impossible. How the artists dealt with it brought into fore the various dimensions with which the symbolic space of the home is informed. Musically, it was perhaps the first benefit concert where there appeared to be a tacit agreement between the performer and the audience that the quality of music does not matter. The very set up made the production of good music impossible. In fact, the very term of producing music was undermined. Nobody expected good quality music, and it was not delivered. This was perhaps the first point of difference from all previous concerts. CEO Hugh Evans told Variety that 'I think right now everyone is understanding that people are (singing) from their homes. We're not planning to dial up production, because we want the money to go toward the cause. Because we really believe that's what matters most'. It goes without saying that it mattered most simply because people were watching them on television.

For a group there was a conscious resistance to the very idea of presenting the home as a stage. Their resistance, extended from the simulation of the home as the performance space, to the very format of the concert which they appeared to categorically oppose. One such moment came when Sir Paul McCartney presented a somewhat improvised version of 'Lady Madonna' on a piano. The song, as the ex-Beatle reminded us, was in commemoration of his mother who was nurse and a midwife, and was dedicated to health workers globally who were fighting the virus in the frontline. So far, so good. Better perhaps, since the anchor Jimmy Fallon reminded us that one should know how big a crisis is when a Beatle gets involved. But, with the actual filming of the performance, the interesting thing happened; notwithstanding the standard of the performance which it was clear over here was not an issue. Paul McCartney shot it in portrait mode, and not landscape mode. It can be dubbed as a 'rookie' error, 'unless Sir Paul thought he was shooting for tiktok', as BBC observed. (Fig. 1) But, the trick of the presentation lies in showing veteran musicians struggling with technology and yet going on with it. The incapacity turns into a show of solidarity. That is definitely one way of looking at it. But there can be another way of looking at it, given the fact that the Beatles were not shy of technological upgrade. Paul McCartney himself produced a highly electronically rigged album only last year. I think, what may have been at play here is resistance to a particular type of upgrade. For better understanding, it can be put beside the raucous rooftop concert. For their return to live show after many years, the Beatles chose not a stage, but the rooftop of the Apple Studio. It is interesting to note here that the roof was that of a 'studio', not a 'home', and thus a designated professional space. The fact that it raised more than a few

eyebrows with both the city administration and the neighbors fitted beautifully with the spirit of rebellion and nonconformity that rock and roll was expected to signify. The home is different from a studio, just as the roof is different from a room. Even within the confined space of the inhabited home, it is a place where there is a degree of freedom – being a space where the inside meets the outside. McCartney's recorded performance nearly heightened the idea that home as performing space can be a product of desperation, but not a replacement. A less subtle and more tongue and cheek presentation of the same statement was carried out by The Rolling Stones in their performance of the apt and iconic 'Can't always get what you want!', where the veterans played over a pre-recorded track. Not only did they play over a pre-recorded track, they heightened the fact, with Charlie Watts playing air drum on his living room sofa. It was clear that the legends shared sympathy with the cause but not with the format.

The attitude of the younger generation of musicians to the entire format was more genuine and serious, but did not lack in variety. Many struggled from infrastructural lacunae. For example, Jennifer Lopez's rendition of Barabara Streisand's 'People' clearly revealed her commitment to glamour even within confinement. The attempt was to turn the living space into a performative arena, and it was a commendable attempt. She 'was bathed in a glow of a hundred fairy lights'. (Fig. 2) Unlike the performers maintained above, there was not a resistance but an attempt to embrace the situation in attempt at simulation. Similarly, a great degree of creativity was put in, though in a completely different direction by Urban Pro. He is in isolation with wife Nicole Kidman, and did not have his regular band to play with.

So, he used his studio space, where he put together footages of himself playing three instruments, and then morphed them in a single frame in post-production. Thus, we had three Keith Urbans in the frame. (Fig. 3) The song he chose was Steve Winwood's Love. For many, it was a time of self-promotion as well. Sheryl Crow was all for professionalism as she used the studio that she has installed in her barn for the production. Not only was the production top notch, it was also a display of her state of the artequipment. (Fig. 4) Equally intriguing was Delta Goodwin's strategic location of the camera to exhibit her awards cabinet. (Fig. 5) But, at the same time, not everyone was up for polish and professionalism. In particular, Charlie Puth's denial to even do the bed before the performance was a statement of honesty and resistance to the way that we have seen above. (Fig. 6)

If there is one thing that we take away from the above analysis is that there has been a conscious attempt on the part of all artists to present their home in a particular way. And that way is not one, but many, which proves how symbolically loaded the very concept of home is. What distinguishes this program is the way every part of it is integrally linked to one another. The differentially produced events, the bringing of them all together, the televised format of its dissemination and the home, the site of its intended reception are all bound together in a structure. I argue here, that notwithstanding its success or failure, the program points at a new direction of media event, with a new kind of world structure in mind. The world, constituting its nation, has moved from, in Baudrillard's term, an abstract to a concrete space. Baudrillard takes a look at the modern machine and quotes from Gilbert Simondon's analysis of the modern petrol engine:

Modern engines are concrete, whereas

earlier ones were abstract. In the older version, each component intervened at a specific stage of the cycle and was then supposed to have no further impact on the others; motor parts were rather like people, each doing their job without ever getting acquainted with their co-workers...

In today's engines each important part is so closely associated with the others by reciprocal exchanges of energy that it cannot undergo any essential variation whatsoever (Simondon 25 – 26)

One of the most notable observations that the critical literature surrounding the Coronavirus outbreak globally has brought into fore is the way in which the world is governed like a combined engine, where each nation is integrally and structurally connected to the other nation. Critics have pointed out to the Fordist mechanism of the management of world economy today. This is precisely what I mean here by a concrete world – a world that cannot be envisioned in any other because each of its national components are connected to another. The move from outside to home does not change that initial orientation but refashions it. The refashioning is done through another semiotic transference that we will talk about now.

We have already mentioned Arindam Chakraborty's categories of the formative characteristics that define home. After everything that constitutes a home, which makes it an abstract space that does not really exist except on a purely cognitive plane, there is a concrete part of it – a part that places the abstract construct of a home on a concrete foundation – which is the presence of the door. The door is necessarily Janus faced. It allows both entrance and exit. It is the door through which man leaves the

domestic space of rest of 'visrama' to enter the outside performative world of 'srama'. At the same time, it is also the space, the world through which the world enters our home-space. As we shut them down, just as we shut down the doors of our physical space – the mouth, face etc. through the use of masks, and the national and state boundaries through bans and lockdowns of different kinds, we not only deprive us the opportunity to go out; we simultaneously stop the entrance from the world. Any entry is seen as an intervention and therefore suspect. Under such a condition, it is the television that becomes a simulacrum of that entity. And therefore, it is through a televised media event that the concreteness of present world is brought into our homes. It has connected home with homes, not dismantling but reasserting the structural concreteness of the present world.

The relationship between the home/world or inside/ outside dichotomy can be approached through another epistemological premise, and with that reflection we will draw this article to a close, which is by relating home not as a space either physical or psychological but as a function. Baudrillard, when he talks about the symbolic function of interiority, states that 'the caesura between inside and outside, and their formal opposition, which falls under the social sign of property and the psychological sign of immanence of the family, make this traditional space into a closed transcendence'. (Baudrillard 16) The statement comes soon after he designates home as a space in memory structurally formed out of the relationship between self and the objects. To quote him:

Human beings and objects are indeed bound together in a collusion in which the objects take on a certain density, and emotional value – what might be called a 'presence'. What gives the houses of our

childhood such depth and resonance in memory is clearly this complex structure of interiority, and the objects within it serve for us as boundary markers of the symbolic configuration known as home. (Baudrillard 18)

Taken at tandem, the two statements highlight two points clearly, first there is a possibility of *closed* transcendence within the traditional space we designate as home – a transcendence which in many ways may account for the intent within creative personals to explore the possibility of this space into a performative one. However, the memory effect that appears with a touch of nostalgia in the second line, highlights the fact that the exploration of this transcendence is possible once the older family system is re-created, where hierarchical interiority of the constituent objects are re-settled. This becomes all the more pronounced when he goes on to describe the modern home space as one where this hierarchical system is jeopardized.

My final argument from the above formulation would be that the lockdown, for a brief space, provided families to revisit the nostalgia and restore a hierarchical relationship with the objects. The compulsion imposed on family members by the lockdown worldwide in different phases, re-created for a certain period, brief perhaps, the fantasy of an older world where the roles were settled and the positioning were hierarchical. As a result, the possibility of closed transcendence was temporarily evoked and explored, and also received, with television – the interior object par excellence of the modern time being its medium. However, since the time is not the same, the fantasy of the revisit was soon saturated with the meaning that could be imposed on it. The modern liberal and dynamic relationship of the individual and objects was re-established, and the previous

notion deconstructed. The Together at Home concert, followed by numerous such at varied levels of production, were accepted with an understanding that such concerts are ultimately structurally unacceptable. Yet, the bigger crisis was somehow raging and such a fantasy of revisit – considering the abnormal the normal could be accepted, since the normal in the world was jeopardized, thus making the programs a success in financial terms. Through problematisation of home and the world as performative spaces at an apparent level, media events strongly reconstituted their traditional respective roles at a deeper one.

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Effects of COVID-19 and Lockdown on the Teaching-Learning Sphere: A Brief Account on the UG Level

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Abstract

Corona virus or Covid-19 is a life-threatening disease that has been declared as “pandemic” by WHO and to control the rapid spread of the disease, Government of India has declared to follow a nationwide Lockdown from 24th March 2020 onwards by following Social or rather Physical distancing as a preventive measure. This Lockdown period affected every sphere as well as created many socio-cultural changes in human life. It also affected the teaching sphere and hence increased our dependency on technology through online classes, media telecast, and so on to be safe and working from home. The present paper intends to see this effect of Lockdown in the teaching and learning sphere delimiting this study in only UG level. Lack of good internet activity, personal touch and lack of interaction due to connectivity issues were found to be the significant drawbacks of virtual classes.

Key Words: Covid-19, Lockdown, Technology adoption, Faculty experience, Student’s feedback

Introduction

Covid-19 is the first and foremost health crisis where people are getting infected by Corona Virus through the droplets of saliva, coughs or sneezes of an affected person. The World Health Organization (WHO) declared COVID-19 or Corona Virus disease as ‘pandemic’ in March 11, 2020 as this is very much infectious. This new life threatening disease brought changes drastically in each and every sphere of human life. In order to reduce the rate of

spread through community transmission by contamination, Government of India, on 24th March, 2020 ordered a nationwide lockdown for 21 days, i.e. up to 15.04. 2020. The whole nation gets locked down including academic institutions. According to a recent report by UNESCO, 150 countries around the globe closed educational institutes that affected more than 80% of students during March, 2020 (UNESCO COVID 19 Educational disruption and response). Following Central Government’s instructions, the educational institutions

across our country began shutting down temporarily as a measure to restrict the spread of the novel corona virus. It's close to a month and there is no certainty when they will reopen. This is a crucial time for the education sector as all the board examinations, entrance tests of various universities and competitive examinations, among others, are held during this period. As the days pass by with no immediate solution to stop the outbreak of COVID-19, school and university closures will not only have a short-term impact on the continuity of learning for more than 285 million young learners in India but also endanger far-reaching economic and societal consequences. The Government of West Bengal has issued an order on 16th April, 2020 and notified to suspend all the classes in schools, colleges, universities, and other educational institutions till 31st March, 2020 that further extended to 10th June, 2020. West Bengal Council for Higher Education and University Grants Commission placed an order for schools and universities respectively to initiate online classes (MHRD, department of Higher Education/School Education & Literacy, dated 21st March, 2020). Hence COVID-19 and lockdown gave us a great opportunity to be familiar with the technologically advanced learning system which advanced countries are already using appropriately for education. University Grants Commission prepares guidelines to assist universities in establishing a virtual system of education with clear instructions with no compromise on the quality of education (UGC Guidelines on Examinations and Academic Calendar for the Universities in View of COVID-19 Pandemic and Subsequent Lockdown). This decision of Higher Education Authorities is a great endeavour but a country like India with poor technology literacy, infrastructure

and less internet connectivity is facing many problems.

In the present paper, we have attempted to study the **impact of lockdown on the teaching-learning process**. The **objective** of the study is to assess how technology adaption, mode of teaching, learning, students' engagement, and faculty experience influenced during COVID-19- Lockdown. This paper also tries to determine the various benefits and challenges for adoption of virtual classes faced both by the teachers and students.

Methodology

The study is based on qualitative data collected from teaching fraternity from higher education institutions and students from Kolkata Metropolitan Area to the remote area of Howrah district, including Hooghly and Haldia. The telephonic interview was conducted among respondents in addition to e-mail and what's app message by providing questionnaire. Faculty have been asked open-ended questions based on four categories formed in a pre-structured questionnaire. Such as technology adaption, student's engagement, location of educational institutions, students' residence and faculty experience towards virtual classrooms during COVID-19- Lockdown. Students have also forwarded their own opinions about online teaching. The sampling method of the study is a convenient sampling. The collected data have been transcribed verbatim and the interpretation of the transcriptions follows themes of concern in the form of findings that are as follows. The following are the opinions shared both by the faculty and students based on their experience of the virtual classroom and teaching and learning.

FINDINGS

In response to school closures caused by COVID-19, UNESCO recommends the use of distance learning programs and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of education. There are various initiatives from the Ministry of Human Resources Management (MHRD), emphasis has been made to continue with teaching-learning processes using online modes such as Google Class room, Google hangout, Cisco Webex Meeting, You Tube Streaming, OERs, SWAYAM platform, SWAYAMPBHA (available on Doordarshan (Free Dish and Dish TV), etc., (Report of the UGC Committee on Examination and Academic calendar for the Universities in View of COVID-19 Pandemic and Subsequent Lockdown, April, 2020). Many institutions subscribed to online free courses for students during the lockdown period. E-Library sources and E-Books' have been shared with students.

Due to the very extensive period of 'lock-down' for COVID-19 contamination, multiple alterations have been observed. One Assistant Professor of a Government College in West Bengal opined that

The total academic calendar has been changed. We the teachers even now do not know when our college will open and how the process of teaching-learning will be 'normal' before the COVID-19 disaster, the entire preparation to complete the curriculum for the students under CBCS students remain incomplete during this period, the students gradually lose their interest to study by do not have any specific ideas about how to routinized their study in the changing situations of altered student hood in 'stay-at-home' condition.

COVID 19: Technology Adaption

When faculty heard about lockdown due to COVID-19, it was a challenge for faculty to look this as an opportunity to go for virtual classrooms, virtual learning, and teaching. With the crisis there is a wide adaption of technology in teaching-learning process. The higher educational institutions in West Bengal have opted for online classes. The tools used by faculty during lockdown for teaching and learning through online modes are Zoom, Skype meet up, Google classrooms, What's app video call, Normal Mobile Conference Call, team link app., etc. Technology has created the revolution in the Indian higher education system and it is widely accepted by all due to the crisis.

The students of final semesters are fundamentally in vulnerable positions in this unexpected scenario. The pressure is huge to the extent of its syllabi, and they have to have complete it and to proceed for the examination as the State Government Order is valid till date (Regulation of University Grants Commission, dated 17th April, 2020). To overcome this situation, one Assistant Professor of a Government College in West Bengal said that,

This batch became my priority and I have created what's app group with them first and the rests later. The so-called 'academic notes' and comments became fluent through chatting, mailing, over the telephonic conversation with 'add call facilities' as the maximum of the students of our college do not have smart phones and if they have the smart phones, there is limited and restricted data usage power at home so online classes, they were and are interested but it was two times only been used till date, through 'team link' app for two hours approximately every day.

COVID 19: Students Engagement

Student engagement is a challenge today, tomorrow, whether offline or online. Initially, faculties had lots of dissonance towards student's engagement during a lockdown. When the faculty started taking sessions online, students' attendance is 80-90% approximately per batch. Students showed their support in this process of teaching. Their enthusiasm can be seen through the following incident. One student of anthropology residing in Hooghly district told that-

If any student unintentionally skips any lecture due to network problem, after the reconnection of the network, they first ask the teachers to repeat those portions.

COVID 19: Faculty Experience

Faculty experiences, directly and indirectly, influence faculty engagement and commitment. Initially, there were lots of disturbance in the minds of faculty when they have adapted for technology and virtual classrooms. As they started experiencing it, it becomes like a habit. In the word of one Associate Professor in a Government College,

The positive sides of online teaching, it has minimum time constraint. Teachers and Students both become skilful in usage of online technologies and multiple forms of ICT facilities.

Some faculties from different educational institutions raised some problems facing during their teaching sessions. In this context we have been trying to analyze the challenges of e-teaching and its limitations. The challenges are represented thematically-

a) Unequal access to technology

Lack of access to technology or fast, reliable internet access can prevent students

in rural areas and from disadvantaged families. Lack of access to technology or good internet connectivity is an obstacle to continued learning, especially for students from disadvantaged families. The Principal of an undergraduate college at Panchla, located in a remote area of Howrah district stated that

It has become very difficult for us at Panchla Mahavidyalaya to reach out to maximum students online. Given to their poor financial conditions and weak network connections, students are not being able to connect online. Zoom or Google classrooms are not a success with them as smart phones are not available to most of them. About 45-47% students could be reached.

One Assistant Professor of Anthropology who teaches in Birati stated,

Network problem prevails while teaching online. What's app call only allows 3 individuals while there is need for more students to be added. Zoom call was good, but due to restrictions from Government and security reasons, stopped using it. If students are asked for giving tests they do not respond.

b) Non-availability of Good Internet connectivity

The second challenge was to have good internet connectivity even in urban areas to avoid buffering and lagging of the live stream. This can happen when Internet connection speed is inadequate to accommodate the encoder's bitrates or if there is excess load on the server which will make the application to crash. As one Assistant Professor of Anthropology rightly told that

Some students never attend online classes due to non-availability of internet facility.

Additionally, to aid in slowing the transmission of COVID-19, hundreds of libraries have temporarily closed. For

students without the internet at home, this increases the difficulty of keeping up with distance learning.

c) Problems faced in Laboratory based work

The third and the more important challenge is the live streaming focuses only on the theoretical imparting of the subjects without actual use of the laboratory, as technical education is more practical based. One Associate Professor in WBES mentioned that

No first hand practical training or community interactive fieldwork training is possible.

d) Disruption in the delivery of education

Needless to say, the pandemic has transformed the centuries-old, chalk-talk teaching model to one driven by technology. Problems are related to inapplicability of board work and make students understand topics through sketches and in-hand demonstration which is possible in class room.

In the words of another Assistant Professor who teaches in Hooghly district:

I believe eye contact plays significant role in sensing the pulse of the students and sensing their reaction during teaching-learning process. It is possible during direct teaching which I miss solely during online class/discussion.

Student's feedback

Students from different educational institutions mentioned about the positive sides of virtual teaching. For example, one student, aged 21 years, studied in Government General Degree College at Singur, Hooghly district said that

This process is useful because teachers and students can set their own time for class by discussion. Class can be taken without

worrying about time limits like college periods. Class is taken through pictorial representation/ ppt, which is a rare incident during face to face class in college. And during lockdown, it is useful because it brings a feeling of original class in college. It also creates a favourable atmosphere for students to get motivated in studies during lockdown, as some students become alienated from their focus due to many factors like- lack of daily interaction with teachers, family problems, personal problems (frustration, depression) etc.

Another student aged 20 lived in Kolkata stated,

Due to the lock down the students have to stay in home for an indefinite period of time and the regular classes are stopped as the institution is closed. Through online teaching it becomes possible for the educational system of country to continue the classes.

Through online classes the educational sessions are continuing, which gives hope to the students that the final examination will be held very soon after ending of this lock down period.

But simultaneously, students highlighted some negative sides of online learning process too. One undergraduate student of anthropology residing in Hooghly district told that-

It is not as effective as face to face classes. It is very tough to co-operate with classmates and teachers in online classes.

Even every student can't participate in these kinds of classes. If anyone doesn't have a smartphone, he would not be able to participate in the classes.

He also mentioned that

According to me the biggest problem is

'internet service' if the services are not good enough it's really very tough to understand all the lectures.

Another undergraduate student living at Howrah is also unanimous about the poor internet network in West Bengal.

Network problem is the major issue of this process. Because of this, sometimes students skip some lectures and important pictorial representation and sometimes leave the class unintentionally.

Discussion

This disruption in the delivery of education is pushing policymakers to figure out how to drive engagement at scale while ensuring inclusive e-learning solutions and tackling the digital divide.

One, immediate measures are essential to ensure continuity of learning in government schools, colleges and universities. Open-source digital learning solutions and Learning Management Software should be adopted so teachers can conduct teaching online.

Second, the challenge was to assess the students' access to internet connectivity especially for the students from rural and backward class. So, the students were expected to have a smart phone with 4G compatibility to enable streaming of the live teaching. Inclusive learning solutions, especially for the most vulnerable and marginalized, need to be developed. With a rapid increase of mobile internet users in India, which is expected to reach 85% households by 2024, technology is enabling ubiquitous access and personalization of education even in the remotest parts of the country. This can change the schooling system and increase the effectiveness of learning and teaching, giving students and teachers multiple options to choose from. Many aspirational districts have initiated

innovative, mobile-based learning models for effective delivery of education, which can be adopted by others.

Limitations and Future Scope for Study

This study is confined to understand the change in the education sector during lockdown by adapting to technology, teaching and learning and engaging students with various virtual sessions. The current study is limited to small sample frame of faculty and students from Higher education institutions due to time constraints. We also delimit our study area from Kolkata metropolitan area to remote parts of Howrah, including Hooghly and Haldia in West Bengal, India, hence finding of this study cannot be generalized for entire India. The emotions and perceptions of faculty towards the usage of technology and experience are different for different users. Future researches focus on various other modes to collect through empirical support and analysis for better results.

Conclusion

It has created the revolution in Indian higher education, as there was lots of resistance in teaching fraternity towards adapting to technology pre-COVID-19 crisis and due to the situation most of the faculty at higher institutions in Kolkata has adapted technology and started taking virtual classes and their experience is great. Hence, educationalists, policymakers take this as innovation and creation from these institutions and start implementing a similar approach to other educational sectors such as under-graduate colleges and universities. Network issues, lack of training, and lack of awareness were stated to be the major challenges faced by them. Lack of good internet activity was stated to be the most important reason by those who did not access virtual classrooms followed

by doubts regarding the virtual classes. Less attendance, lack of personal touch, and lack of interaction due to connectivity issues were found to be the significant drawbacks of virtual classes. We would like to conclude with the statement that this study is not creating hype for virtual classrooms we intended to project the innovation adopted by higher education institutions during this crisis and its challenges faced both by the teachers and students. Despite having so many problems, the teaching fraternity is doing a great job.

In India, we have lots of technical issues when it comes to data consumption and usage. On top of all the issues and against the backdrop of these challenges, it can be said that Online Education is not a substitute but an appendage to classroom teaching and other methodologies. It is a temporary aid during the difficult situation that we are facing.

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COVID-19 and History Writing: *A Paradigm Shift?*

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"In a word, in History, as elsewhere, the causes cannot be assumed. They are to be looked for..."

- Marc Bloch, *The Historian's Craft*.

The COVID-19 outbreak of recent times has had far-reaching consequences apart from its infectivity and efforts to quarantine¹ from it. Not only does the year 2020 mark the beginning of the twenty-first century, but it also divides the recent History of the world in two time periods, "Before Corona" (BC) and "After Corona" (AC). Future history will narrate the inferences of these two periods in a more comprehensive way. The urge to identify similarities between Covid-19 and other pandemics results in creation of some misleading conclusions. Therefore, we should emphasize upon the need to note the differences. We can further elaborate the wide range of long-term consequences of this Pandemic, which the world will face, like economic devastation, high mortality rates, social disorientation, job loss and of course severe health crisis.

THE CHALLENGES

In the discipline of History when we view the present, sometimes we see it through the lens of former occurrences, as in case of History of Disease also, when we see the present occurrence of disease we see it through the lens of former manifestation of diseases. We usually focus on the similarities and overlook important differences. History is the daughter of time and each event of History has its own distinction in every time. As Burke commented, 'a way of seeing is also a way of not seeing- a focus on object A involves a neglect of object B'² A historical approach to the Past, reinforces an idea of past as a series of interlinked crisis that often neglect the important insights into cause and effect.³ Historians need to push back against easy analogies and examine the specific contexts of outbreak

in order to bring out the actual context and consequences of the event.

Even when Thucydides was writing his history, he said, he was writing about Plague so that, ".....people to study in case it should ever attack again, to equip themselves with foreknowledge so that they shall not fail to recognize it"⁴. To provide a substantial account of what had happened in the past and will happen, in future, tend to be repeated with some degree of similitudes perhaps he made his comment. To the historians Thucydides' work is considered as a social scientist's effort to make general, fundamental, principles emerge from particular actions in order to ensure that happenings of the past can render an effective guide to the future History. The Plague of Athens is treated by Thucydides in the same way as the war with careful attention to the recording of

empirical detail without suggesting any reasons for the epidemic. His purpose is entirely instructive in the hope that future generations would be able to learn from the lessons of the past.

THE HISTORIOGRAPHY

If we want to compare the COVID-19 pandemic with the earlier pandemics and epidemics in the past, we will have to understand both the similarities and dissimilarities involved, as the time matters in History so are the contexts. Next, when we will focus upon the similitudes between the past and the present scenario of the disease, we should consider the events such as mass migration, and the role played by fear, panic and rumours, which have been persistent throughout the course of history. Thirdly, in order to reconstruct the social history of epidemics, the local and Governmental sources are important as it was in the past. But now it is also important to start more critical dialogue on this topic, even now we can think about the more use of oral history methodology. Because COVID-19 epitomises more than what had happened in History, in future history a new kind of social distancing will control our lives where perhaps a new kind of patriotism will emerge, a decline in polarization will find its way, we could see less individualism, we could see new forms of reform, there will be a new aspect of religious worship. There is no doubt that earlier pandemics in the past have transformed societies forever, but this pandemic has an inimitable characteristic which was unknown to the historians. Pandemics had a deep impact on the social, economic, and political conditions across the globe. In the words of Frank Snowden, "Epidemics are a category of disease that seem to hold up the mirror to human beings as to who we really are."⁵ The Covid-19 pandemic has similarly addressed expert

lenses towards the diseases that atrophied the world in history. For long, historians and scholars working on colonial India overlooked the history of health and medicine. It is only in the past couple of decades, the field has received significant attention. Furthermore, considering the present global health crisis, perhaps it is crucial to initiate a serious dialogue on the pandemics in Indian history. We also realized that instead of waiting for 'normalcy' to return, it is important that a discussion should initiate during this ongoing public health crisis and socio-economic disorientation. Covid 19 is an eye opener in many ways.

HISTORICAL AMBIGUITY

The complications start from a historical ambiguity about whether disease should be constructed biologically or socially. This is a problem that the historiography of epidemics reflects. Different civilizations have different understandings of the general nature of disease. Modern historical writing, however, has reflected two relatively recent such understandings: the biological, view that rose to dominance in the late nineteenth century, and the more recent conviction that diseases are social constructs. Those two (at times incompatible) understandings now set the questions that historians of disease attempt to answer. Because disease is a "biological process," but what were its physical effects, how did it spread, how many died or were sickened by it or how did it affect the society are some of the questions that relates history with it. Beliefs that diseases are social constructs have led to other questions: "What did the society make of it?" and "How did the society confront it or perhaps even use it?". Unless this crisis of civilization is addressed in the coming decades, history of mankind will be incomplete.

The development of human societies has suffered the depredations of infectious diseases for thousands of years. Human civilization has been as much affected by contagious diseases as by wars, revolutions, and technological changes. Pathogens with high impact that are easily communicable from human to human have caused dramatic population decline, political crises, and economic downturns from time to time, while impacting human lives in an innumerable way. They have also caused substantial developments in the understanding of diseases, public health, hygiene, and sanitation.

THE WORLD SCENARIO

The ancient world knew of the occurrence of such pathogenic diseases. The Greek historian Thucydides has given an account of an epidemic that began in Africa and spread to Greece in 430 BCE. It killed nearly a third of the Athenian population. The mighty Roman empire was ravaged by the Antonine Plague or the Plague of Galen in 166 BCE that lasted for nearly a century in phases, and again by the plague of Justinian in 542 BCE. Whatever its route, Justinian's plague spread rapidly, and by 547 sparked epidemics as far away as England and Ireland. It rampaged for 4 months at Constantinople, killing as many as 10,000 a day and claimed 300,000 victims. Some historians found that this event could have ruined Emperor Justinian's efforts to reunite the Western and Eastern relics of the Roman Empire and marked the beginning of the Dark Ages. The plague changed the structure of the empire, squeezing Emperor Justinian's plans to bring the Roman Empire back together and causing massive economic devastation. It is also attributed with creating an apocalyptic atmosphere that impelled the rapid spread of Christianity.

In many ancient societies, people believed that spirits and Gods imposed disease and destruction upon those that deserved their wrath. This unscientific perception often led to disastrous responses that resulted in the deaths of thousands, if not millions. Recurrences over the next two centuries eventually killed about 50 million people, 26 percent of the world population. Black Death, Responsible for the death of one-third of the world population, this second large outbreak of the bubonic plague possibly started in Asia and moved west in caravans. Entering through Sicily in 1347 A.D. when plague sufferers arrived in the port of Messina, it spread throughout Europe rapidly.

Another devastating disease that occurred in Europe which was the Spanish flu that caused in 50 million deaths worldwide, that disease was first detected in Europe, the United States and parts of Asia before rapidly spreading around the world. At the time, there were no effective drugs or vaccines to treat this killer flu strain. Wire service reports of a flu outbreak in Madrid in the spring of 1918 led to the pandemic being called the Spanish flu. By October, thousands of Americans died. But the flu threat disappeared in the summer of 1919 when most of the infected had either developed immunities or died. These are some horrifying diseases that have been witnessed by history. We are well informed about those happenings which altered the society, as there is some historical documentation of it.

THE INDIAN PERSPECTIVE

Ancient Indian literature also has references to epidemics, but we do not have a narrative account of an epidemic

outbreak. Epidemic diseases are mentioned several times in the Arthaśāstra of Kautilya while there is a discourse on the subject in the classical medical treatise of the Caraka Sanhitā. In modern India however we have a few historical documentations of some epidemics which influenced Indian History in several ways. For example, Plague broke out in Maharashtra in the middle of 1896 and by the end of 1898 claimed, 1,75,000 lives by government estimate. Plague also made its appearance in Kolkata, the Baghbazar area in the northern part of Kolkata. News came about the governmental measure to prevent the spread of plague in Bombay caused a panic among the local people. Most of the residents of Calcutta were said to have departed the city. The rumours were groundless. The government from its experience took much greater control. But people's fear was not relieved. Swami Vivekananda was extremely upset on hearing this. He was in Darjeeling and was suffering from influenza, though he was improving then. On May 3 he came back to Belur Math and prepared a draft of a manifesto promising to help those who urged, specially the poor and destitute. Even Swamiji was ready to sell some assets if needed, to fight against the plague. However, no such drastic action was needed, as the plague was restricted to a few cases and the government hospitals could successfully deal with them. On Vivekananda's instructions, a Plague Relief Committee was set up on 31 March 1899 with Sister Nivedita as the President of that committee. On 6 April 1899 *The Statesman* published a letter by Sister Nivedita describing the relief work carried out by the Ramakrishna Mission and appealing for help. On April 2 Nivedita spoke to the students at the Classic Theatre on 'The Plague and the Duty of Students'. Vivekananda presided over the meeting despite ill health.

Another disastrous disease was 1918 flu pandemic. It was the outbreak of a deadly influenza which occurred between 1918-1920 as a part of the worldwide Spanish flu which has been already discussed. This pandemic is supposed to have killed up to 14 -17 million people in the country, the most among all countries. David Arnold⁶ (2019) estimates at least 12 million dead, about 5% of the population. The death toll in India's British-ruled districts was 13.88 million. Mahatma Gandhi, the leader of India's independence struggle, was also infected by the virus. If he had not survived, India's struggle to shed the British colonial oppression would have taken an extremely different route. The pandemic had a significant influence in the freedom movement in the country. The healthcare system in the country was incapable to encounter the sudden increase in demands for medical attention. The consequent toll of death and desolation, and economic upshot brought about by the pandemic led to an upsurge in reaction against colonial rule. *The outbreak in Bombay, a congested city, was the source of the infection's spread back then - fascinatingly enough, this is something that virologists are fearing now. With more than 20 million people, Mumbai (erstwhile Bombay) is India's most populous city and Maharashtra, has reported the highest number of corona virus cases in the country.* More Indian adults and children were infected than resident Europeans. The newspapers recommended people to not spend time outside and stay at home. "The main remedy," wrote *The Times of India*, "is to go to bed and not worry". People were reminded the disease spread "mainly through human contact by means of infected secretions from the nose and mouths". "To avoid an attack one should keep away from all places where there is overcrowding and consequent risk of infection such as fairs, festivals, theatres,

schools, public lecture halls, cinemas, entertainment parties, crowded railway carriages etc,” wrote the paper. People were advised to sleep in the open rather than in

badly ventilated rooms, have nourishing food and get exercise. *This is something which is also strikingly similar with the present scenario.*

SOME PANDEMICS THAT CHANGED HISTORY

	Name of the Pandemic/ Epidemic	Time	Died
1.	Pandemic in Athens	430 BC	2/3 rd of the total population
2.	Justinian Plague	541	50 Million
3.	The Black Death	1347-1351	1/3 rd of the World Population
4.	The Great Plague	1665-1666	100,000
5.	First Cholera Pandemic	1817	150,000
6.	Third Cholera Pandemic	1852-1860	6,00,000 (approx.)
7.	Spanish Flu*	1918-1920	50,000,000
8.	SARS	2003	774
9.	COVID 19* ⁷	2019	(7,750 as on 11 th June in India.) 411,414, as on 11 th June, 2020, 08:10PM

History shows an unchanging pattern in people’s reactions--they tend to point the finger of blame at an unknown entity, be it foreigners, another religion, the health system, those who eat meat or drink alcohol. But when it came to the flu in 1918, the British did little. There was no known cure, no vaccine (as there was by 1898 for plague), and no certainty how the flu could be stopped. Voluntary organisations like the Ramakrishna Mission and the Social Service League in Mumbai took over much of the work of supplying food and medicine. “The plague threatened Europe from Asia; the flu spread in the opposite direction, from Europe to India.” explains Arnold.

IN SEARCH OF NEW HISTORY

Since we are going through a great crisis, affecting our day to day life, it is obvious for a historian to assume that it can be a turning point in modern history. But it is also true that this kind of crisis can be a turning point in a different way altogether

as, this Pandemic not only will reshape the History but at the same time it will put forward the speed of historical process, because the world we are entering will be fundamentally different from what existed before. Some predict the pandemic will bring about a new world order led by China; others believe it will generate the demise of China’s leadership. Some say it will end globalization; others hope it will usher in a new age of global cooperation. Others are of the opinion that it will boost nationalism, weaken free trade, and lead to government change in various countries—or all of the above.

But there is no doubt that, the world ensuing the pandemic era is unlikely to be radically different from the one that preceded it. COVID-19 will not bring so much change in the basic direction of world history as accelerate it. The pandemic and the response to it have uncovered and underlined the fundamental characteristics of geopolitics today. As a result, this crisis

pledges to be less of a turning point than a way station along the road that the world has been traveling around for the past few decades. It is too soon to predict when the crisis itself will come to an end. We can just hope for a healthier future.

But the historians have a definite work to do in this critical moment. We will have to write more, discuss more. There is much that most of us and each of us have already experienced in the past few weeks that is unforeseen, volatile, incomprehensible, and altogether a new experience. Much that we have not felt before and not seen. What is it like to live today knowing that we do not know what tomorrow and the day after will bring? I think that we should keep a record – in different forms of our own choosing, may be through a journal, a blog, a series of artworks, a short history, oral interviews – of our life in these unparalleled days. Each individual perspective is valuable and adds to the whole. Many of us are writing today and producing our work on social media. It is an outburst which we can gather... these voices, these experiences, all this creativity. They are all a record of our times. These voices are important and can be a discourse of coming History. How will we deal, socially, psychologically, with the increasing number of deaths all around us? Posterity will ask you what was it like during that pandemic – “What was it called? How did it affect your life?”

We can think about oral history by interviewing different stakeholders related to this pandemic. In this tough situation, we can think about the method of conducting historical research through recorded interviews of the narrator with personal experience of these historically substantial events, with the goal of adding to the historical record of this pandemic situation. Because it is a primary source, an oral history is not intended to present

a final, verified, or “objective” narrative of events, or a complete history of a place, but it can be definitely a way for documentation for the future historical writing. It is a spoken account, reflects opinion offered by the narrator, and as such it is subjective. Oral histories may be used together with other primary sources as well as secondary sources to gain knowledge and insight into history of COVID-19 in the upcoming years.

THE EPILOGUE

When we think about the individual in this pandemic, think of ourselves and we can write about “myself”, think and write about other individuals, and about our relationships with others, to our society, societies, to our loved ones, our friends, our institutions. When we think about society, we can think about parts of it; death, disease, medical systems, online classes, isolation, social (physical) distancing, my town, rich people and poor, public events, the market, workers from the unorganized sectors, selfishness, fear, economic policies, exponential expansion, individualism, cooperation, competition, solidarity ... and more. In short if we can touch different domains of our life, through our record or writing, who knows this might become the substantial evidence for History soon? ‘The good historian is like the giant of the fairy tale. He knows that wherever he catches the scent of human flesh, there his quarry lies’⁸ as Marc Bloch said. He also said, ‘...in the last analysis it is human consciousness which is the subject matter of history.’⁹ So it is the time for another *Historian’s Craft*, where not only the theories of history but the history of life will be discussed because that is what signifies history as a whole. And if we are sure that History has its uses, we will have to write that kind of History that can be used for our future generation.

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Locked In and Down: A Study on Mental Health of Young Students

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Abstract

In order to prevent the spread of COVID-19, lockdown and social distancing have been adopted as the only measure worldwide. The impact of such step is multifaceted creating unprecedented crisis in each sphere of social life. A fundamental feature of social life is social interaction. It becomes a matter of scholastic interest when social interaction, in its commonest form, that is, face to face interaction, is restricted producing profound impact on individuals irrespective of gender, class, race or caste. In West Bengal, academic institutions are shut since middle of March 2020. School children and college students are separated from their teachers and co-learners, both of whom used to be an essential part of their social support system, left by themselves to cope with the psychological crisis. This paper aims to uncover the effect of this traumatic period on the mental well-being of college students.

Key words: lockdown, young students, social support, psychological crisis, mental well-being

INTRODUCTION

Every century has posed threat, in one way or the other, to the survival of human society, at least in part, by designing various challenges. Every time the problem comes in a new disguise. Sometimes it can be the scarcity of necessary resources like food and famine, leaving the question about its nature— natural or constructed— unanswered. Sometimes an entire civilization has been wiped out as a result of long term ecological and climate change. It has also been long drawn battles— involving application of deadliest weapons between

forces creating a bipartite division of the world power. Above all, menacing maladies have continued to be present throughout the history of human civilization. But rarely such difficulties have made their presence felt globally, at least in manifest form, the way the pandemic of COVID-19 has done. This ailment is 'novel' indeed as it has made 21st century witness worldwide lockdown making the present era unique from its predecessors. In order to combat the typical viral nature of the disease the world has shut itself behind the door labelling every interaction, barring the virtual one, as strictly prohibited since it increases one's

risk of getting contaminated. Lockdown and social distancing have been adopted as the only preventive measure worldwide.

A fundamental feature of social life is social interaction. It becomes a matter of scholastic interest when social interaction, in its commonest form, that is, face to face interaction, is restricted, if not prohibited, producing profound impact on individuals irrespective of gender, class, race or caste. The impact of such step is multifaceted creating unprecedented crisis in each domain of social life. Each and every known sphere of collective life is troubled, prominent ones being the health, administrative and economic sectors. But one side— the looming psychological crises, caused by social distancing— has remained largely unaddressed by policy makers, administrators and common people alike. Mental health problems, such as, depression, is still not viewed by larger society as causing immediate lesion to the functioning of social life, though World Health Organisation has declared it as a common mental disorder and one of the main causes of disability worldwide affecting 264 million people (WHO: 2020).

Academic institutions like schools, colleges, universities and other centres of learning where millions of young pupil used to be gathered were shut to keep younger generation safe from the grasp of the disease. However, this step ensuring the physiological wellness of young students appears to have undermined the psychological well being of the said group. But the pandemic has brought not only the risk of death from infection but also unbearable psychological pressure. Methods of guiding students to effectively and appropriately regulate emotion during public health emergencies and avoid losses caused by crisis events have become an urgent problem for colleges and universities.

In West Bengal, academic institutions are shut since middle of March 2020. School children and college students are separated from their teachers and co-learners, both of whom used to be an essential part of their social support system, left by themselves to cope with the psychological crisis.

REVIEW OF LITERATURE

Sociology as a discipline is concerned with appreciating the basis for person's integration into society and with the factors that decrease integration, thereby contributing to an array of social problems and human pathologies. Classical sociological theorists shared a common interest in the changing nature of the social bond as agrarian societies were being transformed into urban, industrial societies. From Aristotle and Martin Buber— many philosophers have emphasized that the essence of human existence is expressed in our relationships with others. Nearly all were disturbed by the progressive weakening of persons' ties to society, and Durkheim, writing on issues immediately central to this research, explored the linkage between integration and suicide (**Durkheim**: 2002). Following this tradition, recent sociologists have considered the ill effects of a society characterized by radical individualism. In all of this, the presumption is that the emotional health of individuals, and ultimately society itself, is related to how firmly individuals feel embraced by and connected to communities— large and small.

Turner and Brown (2009) hold that social support tends to matter for psychological well-being in general, and for depression in particular. By the term social support, they refer to one's social bonds, mainly primary group relations. The relationships existing in the sphere of social support include various other labels too, such as social bonds,

social networks, meaningful social contact, existence of confidants, companionship and many others. Obviously these concepts are not the same, but carry similarity in the sense that they focus on the importance of human relationships. If the need to form loving relationship with others remains unfulfilled, physical as well as mental health suffers.

This issue of social support and social integration is central to sociological theory and research. Social bonds and supportive relationships with others are essential for well-being of one's mental health. Turner and Brown gave a synopsis of various conceptual understandings of social support that guide the research literature, demonstrating how social support is a multidimensional concept involving perceived, structural, and received support. A large portion of research began with the hypothesis that lack of social support increases the risk for developing depressive symptom. Findings of many studies consistently support this hypothesis, though the explanation about the causal connection between presence of social support and state of one's mental health varies. The degree to which social support affects one's mental health and the degree to which it protects one from the effects of stress also vary across different social groups of the population. Social status (e.g., gender, socioeconomic condition, marital status) affects the availability of social support, as well as one's exposure to stress. At the same time mental health status of the individual and his or her personality influence the availability and perception of social support.

Studies show that individuals who have very few social contacts experience higher level of stress than people with many acquaintances. The consequences of facing higher stress level are many, including, emotional problems, accidents, physical

ailments, disease and even death. The reason why social isolation affects people negatively has connection to the buffering affect of a social support system. If we have people to talk to, to test our thoughts and feelings on, and to get support from helps us deal with stress. (**Orlandi and Prue: 1988**). In many writings, the need for positive and stable relationships is described as among the most basic and fundamental of human needs. Like biological needs, that is the need for food, shelter, and sleep, the need to belong is deeply rooted within evolutionary history and has a profound influence on ongoing psychological processes. Given the fundamental nature of the need to belong it seems logical that social exclusion causes immense increase in emotional distress. Forming and maintaining bonds with others is thus considered among the most fundamental and pervasive of all human needs. Scholars suggest that the need to belong formed in humans' evolutionary past as the possible outcome of the increasing tendency to become reliant on others for survival. It suggests that humans are not well suited for living in complete solitude. Social exclusion causes a state which is characterized by emotional numbness, lethargy, perceptions of meaninglessness, altered perception of time, and avoidance of self-focused attention. This deconstructed state may provide isolated individuals a temporary exemption from the aversive emotional states that can result from threats to belongingness. (**DeWall, Baumeister and Masicampo: 2009**).

The need of togetherness is the basic precondition functioning behind the formation of society. Solidarity, unity, integration are words which are defined and redefined in various contexts related to group life, be it the debate of homogeneity and heterogeneity, collectivism and individualism, melting pot or salad bowl

(Biswas: 2020). Moreover, human beings are described as social animal which emphasizes the fact that even when every biological need is fulfilled, an individual craves for companionship. It is intrinsic to human nature to interact with each other. (Biswas: 2015).

The study by Zimet et al. (1988) reconfirmed the previously claimed relationship between high levels of perceived social support with low levels of depression and anxiety symptomatology. As important source of social support, three groups have been identified in their study—family, friends and significant other. Similar type of research was done by Clara et al. (2003) much later. Bolger, Zuckerman and Kessler (2000) highlighted the role of social support which remains unnoticed by the recipient yet promote coping to major stressors. Study by Branje, van Aken and van Lieshout (2002) examines the degree to which perceived support differs in horizontal relationship (marital and sibling) to vertical (parent-child) relationship. Harris (2001) emphasized the positive role of social support, as they can work not only as protection against development of depressive symptom but also for the promotion of recovery.

Youth, as a special category of life, is characterized by a process involving crystallization of identity, struggle to establish autonomy, alternative phases of stimulation and boredom, a personality having sociability as essential to its nature, along with mental development, physical maturation, and an attempt to find a balance among all these (Gunter and Moore; 1975). This is the same stage when important attitudes about significant things are developed. Be it a healthy approach or disturbed way of thinking about life processes, all are acquired through this phase of life (Howell: 1954). In other words,

adolescence and young adulthood are significant periods of social, emotional, physical development. During this time, young people push barriers, take on new roles and responsibilities, and increasingly become more reliant on their peers and less so on their parents and caregivers.

OBJECTIVES

This paper aims to unfold the impact of this traumatic period on the mental well-being of undergraduate students as they are forced to stay away from academic institutions as well as other areas of social life. Studies have suggested that public health emergencies can have many psychological effects on college students, which can be expressed as anxiety, fear, and worry, among others. Keeping these reasons in mind, the present study has following objectives:

- i) To assess psychological condition of college students by measuring depression, stress, anxiety and loneliness during pandemic. Two case studies have been presented.
- ii) To discuss factors influencing mental well-being of the said group.

METHODOLOGY

This study is based on primary source of information. Population of this study was undergraduate students studying in various academic institutions located in Kolkata such as Jadavpur University, RCC Institute of Information and Technology, Scottish Church College and Rabindra Bharati University. Non-probability sampling method *snowballing* was used for this research. Sample size is 65 among which 37 are female and 28 are male. The range of age of the respondents is 18 to 23 years. The unit of analysis is individual student. Both quantitative and qualitative methods have been employed here. In order to capture

various aspects of the mental well-being of young students, depression, anxiety, stress and loneliness have been measured. Center for Epidemiologic Studies Depression Scale (CES-D) has been used for measuring depression. Sheldon Cohen's Perceived Stress Scale has been employed to find out how stressed respondents are. Loneliness is measured by De Jong Gierveld Scale. Zung Anxiety Self-Assessment Scale was used for measuring anxiety. Data was collected from April - May 2020. Due to lockdown, it was impossible to conduct face to face interview. Questionnaires measuring depression, loneliness, stress and anxiety were sent to respondents either via e-mail or via messaging app. Simple percentage analysis has been done while presenting the result of those tests. After analysing

result of those scales, an interview over telephone was conducted for which a semi-structured interview schedule was utilized. This study is divided into six parts – Introduction, Review of Literature, Objectives, Methodology, Result Discussion and Conclusion.

RESULT DISCUSSION

The results of this study have two aspects. First, overall psychological conditions of respondents have been presented through simple percentage analysis. Two case studies have been discussed to provide a brief account of respondents' daily life and related impact on their psychological setup. Second, factors influencing their mental health have been analysed.

A) Simple Percentage Analysis

Table no. 1 Psychological condition of students

Component	Percentage Analysis			
Depression	Non- depressed= 50.76		Depressed= 49.23	
Stress	Low= 16.9	Moderate = 52.3		High = 30.76
Anxiety	Normal= 23	Minimal to Moderate= 33.84	Severe= 32.3	M o s t severe= 10.76
Loneliness	Not lonely= 6	Moderate= 50.76	Severe= 36.92	Very severe= 6

Chart No. 1 Proportion of depressed and non-depressed

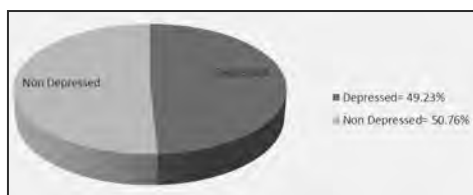


Chart no. 1 represents the proportion of depressed students to non-depressed students. Using Center for Epidemiologic Studies Depression Scale, the researcher found that 49.23% respondents got score

16 or above in this 20-item scale. They have been considered depressed against 50.76 % respondents who got score lower than 16 in CESD Scale.

Chart No. 2: Amount of stress



Chart no. 2 represents the amount of stress among students. By using Sheldon

Cohen's Perceived Stress Scale, it was found that 16.9% of respondents scored 0-13 which was considered low stress. 52.3% respondents scored 14-26 which is considered as moderate stress. Rest 30.76% scored 27-40 which was considered high perceived stress.

Chart no. 3 represents the anxiety experienced by students by measuring it through Zung Anxiety Self-Assessment Scale. 23.07% respondents feel anxiety within normal range. 33.84% respondents experience minimal to moderate anxiety. Both categories do not need any medical attention for anxiety related issue. But 32.3% respondents experience severe anxiety while 10.76% respondents reported to have most severe anxiety.

Chart No. 3: Level of Anxiety

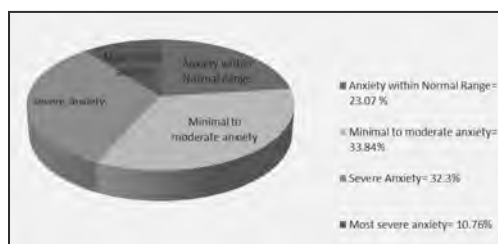
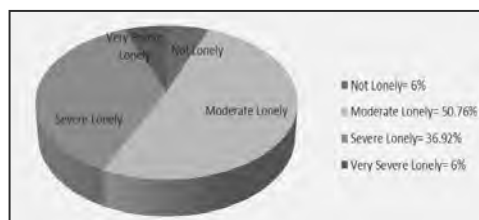


Chart no. 4 represents Loneliness reported by respondents. By the result of De Jong Gierveld Scale, it was found that only 6% respondents reported that they are not lonely. 50.76% respondents experience moderate loneliness. 36.92% respondents experience loneliness on severe level, whereas 6% respondents are very severe lonely.

Chart No. 4 Feeling of Loneliness



B) Case Studies

A female respondent gave an account of the problem she was going through due to lockdown which mainly centred on the issue of being the single young member of the household. Her family has total five members, barring her there are her parents and two old ailing grandparents. Under such circumstances her mother usually keeps busy with domestic chores while her father manages duties outside home. In her words, "Since I used to spend the greater part of the day in college and coaching, I never experienced any problem before. But during lockdown I am here in my home with my family for the entire day. Now it seems, none of them understands my language. How can I explain to them that it is impossible to study for the whole day?" She further adds, "My mother says I do not value this privilege of being able to continue my student life even after crossing 20 as she was forced to marriage by this age. She expects me to dedicate all 24 hours to study, anything else is viewed as wastage of time and money. My father also call me irresponsible." Such differences were not noticeable in pre-corona days, as the girl observes, but the lockdown has forced both parties, young and old, to spend time together and thereby creating opportunity for confrontation.

II.

A male respondent provided a picture in which he feels imprisoned. In his words, "Since childhood, I am used to spend quite a lot of time playing outside. But now I am not allowed to step outside of our flat. I feel like a prisoner." When asked about what is actually bothering him, he highlighted the disturbing feeling of being under constant surveillance of parents. In his word, "If I laugh while reading a text from a friend,

my mother asks the reason. If I go to another room or balcony while taking a call, or if I raise voice during a conversation, my father frowns. Now it is impossible to share everything with parents." This apparently infinite break is viewed by parents as an opportunity to take rest and make future, as the student adds. His father recommends reading certain books which he does not find enticing enough, so he does not read them. He then gets scolded for looking at smartphone instead of reading those books. He feels sad about missing college days, and says "College days are supposed to be fun. This is once in a lifetime experience. But our whole generation is destined to be deprived of that time. Why are our parents not being able to see that?"

C) Factors affecting Mental Well-being of Young Students

This paper has made an attempt to unfold the impact of this unprecedented lockdown on the mental health of young students. The emphasis was given on the role of social support group available or absent in the surrounding of young student during lockdown. Following are the factors that young students have identified as responsible for causing negative conditions on their mental well-being.

First, COVID-19 is viewed as detrimental for the present life of the respondents as well as the future. The economic uncertainty caused by the lockdown has adversely affected this group of young adults. There is still no clarity about the examination schedule on the part of administration as the pandemic is creating new record everyday be it in terms of increase in the number of infected people or a rise in the death toll. Therefore these young adults, eager to earn economic independence, are now flummoxed about their future. Many students have parent/s either on

the verge of retirement or have already retired. Moreover, some are pursuing the degree course by taking educational loan. Therefore the economic burden and the anxiety over it, which was already heavy, have now taken enormous form. In addition to that, the rising death toll and the increase in the number of infected people are flashing throughout the day on television resulting into increased amount of anxiety on young minds. Some respondents revealed that they have stopped watching news as a coping mechanism.

Second, young students are not used to spending time within the confinement of their home. Usually one spends a larger share of a day's time in college and coaching class. Even when one does not attend class, one can always show it as an excuse to stay out and meeting friends as long as colleges remained opened. Even after returning home one used to spend lot of time interacting with their friends on internet. Weekend usually consists of rest and preparation for the coming week. Students also used to plan long ahead in order to schedule their meeting during vacation — be it a chat session at one's place or watching a movie together or simply roaming around. But lockdown has presented with a situation where even stepping out of one's home is strictly prohibited. Therefore one has to interact with family members only. But, sharing one's thoughts with parents or caregivers is a habit that college students do not follow on a usual basis. Rather one's peer group members fulfil such function providing the support one needs. But such form of support from one's friend circle is inaccessible in this period whereas parents fail to provide one with the same. Under such circumstances burden on mental health in the form of anxiety and stress increases day by day.

Third, the habit of being active in social

media has not removed the feeling of isolation either. This study has also brought into fore the fact that young students who are generally viewed as spending lots of time on virtual interaction and attaching lesser importance to real life social interaction, do not find the former type as the substitute of the latter. Rather in respondents' view, social media used to complement the events taking place in social life. Pictures of one attending a party or gathering, watching movie with friends or visiting a restaurant or shopping mall used to flood one's social media account. The account holder expected reactions from her or his contacts on those pictures. Discussions over those events or experiences used to take place on virtual platform. But now, being locked inside one's house has actually resulted in a way of life which is termed as 'not exciting' by respondents and one does not like to share it in social media. Now mostly forwarded posts rather than personal experiences comprise one's social media status. Most of the respondents labelled virtual interaction as a monotonous practice in the total absence of face to face interaction.

Fourth, the frequency of interaction with friends is reduced too, as respondents reported. Lack of interesting topics is something that was responsible for this decrease as a respondent mentioned. In one respondent's words, "In first two weeks of lockdown period, the frequency of texting or calling was high. But as the days passed, I gradually lost the urge of calling my friends. For how long one can talk about pandemic? But besides that, there is nothing to talk about." For some, this span of social distancing has reinstated the feeling of loneliness that was experienced by the respondents earlier but to a lesser degree.

Sixth, management of time has become a serious concern for many respondents.

This lockdown period has presented with ample time to study as one cannot go out and spend time doing outdoor recreational activities. In pre lockdown days, their busy schedule hardly left them with any time to think, as the respondents revealed. Even in weekends, one used to be busy, either with recreational activity or with some added career advancement course. But now this sudden and unprecedented break from their usual busy schedule produced a sense of emptiness which has engulfed their thought process causing stress and anxiety. In one respondent's words, "Earlier, I used to be worried as I did not have enough time to study. Now that I am free for the entire day, am I doing justice to the time I am given?" Many respondents reported anxiety over not being able to utilize this ample time 'properly'. On being asked what they think of as 'proper' use of time, they came up with various answers conveying the same sense— doing any activity that would be beneficial for their career. The inability to share their worries with parents or members of one's family has made the situation worse. Only few students have managed to utilize this opportunity to enhance their skills, by enrolling in a new online course. Many respondents have reported lack of concentration in this period.

Seventh, being detached from the academic institution also increased the amount of worry. Classes are now being conducted in online mode. Difficulties experienced by students while attending such class has added to their anxiety. The absence of stable network, resulting in difficulty in viewing and listening to the instruction is reported unanimously. But apart from that, other problems are experienced too. In a real classroom, students are encouraged by the teacher to ask questions on the topic being taught if there is any concept that they have not

understood. When online classes are being held, students do not feel comfortable to ask questions as they fear it will hamper with the flow of the class. Asking the teacher to repeat her instruction demands more time and data from others attending the class. Many times students keep their audio in mute mode so that noises around them do not cause disturbance to the classroom. They are asked to write questions demanding further explanation in the form of text messages— a practice which they find difficult to follow. A respondent said, “Even if I do not ask question to clear my doubts, many times teacher repeats the explanation of a difficult concept while we are in the real classroom. Probably she gets the idea about our problem just by looking at our face. But that never happens in an online classroom.”

Eighth, teacher used to form an important part of their social support group, as some respondents reported. “I missed two assignments due to a surgery, but my departmental teachers provided me with great support”, a respondent said. Such supportive relationship is missed in this lockdown period. Students have also reported lack of warmth in the behaviour of teacher in the virtual classroom.

CONCLUSION

This study has revealed various negative conditions of the mental health of college students as reported by them in this lockdown period. The factors influencing their state of mind have also been discussed here. It can be said that the members of such vulnerable age group are significantly affected when faced with public health emergencies, and they require help and support. The order of lockdown has created a situation where problems that existed underneath the busy schedule of pre lockdown period in latent form, suddenly emerged with enormity. Be it the feeling

of disconnection or anxiety about one's future, the problem was already there, as the respondents reported. But the days marked by social distancing are also characterised by the aggravated nature of the same problem as interaction with friends which previously used to provide a platform for venting out or 'stress buster' is no longer effective nor guidance by teachers is available.

Staying away from one's known circle of social support group is not an unfamiliar concept. Individuals often do that while staying far from one's home for career advancement, either for pursuing higher academic course or for doing job in another state or country. There one is detached from one's friends and family members. But at the same time one is given the opportunity to form a new group in new place, though that formation varies quantitatively and qualitatively. But lockdown has created a unique situation where such formation is not possible. One is staying with one's immediate family members only while being detached from the other important social support group such as friends but is not being given any opportunity to form a new one. It has resulted into a forced shrinkage of one's circle causing stress, anxiety, loneliness and depression.

Mental illness has become chronic problem of the group of young adults worldwide. 75% of mental illnesses appear for the first time before the age of 25—usually beginning after puberty and peaking in the early 20s. A collective effort by various agencies including administration, policymakers and caregivers is needed to address this issue and offer a useful remedy, especially when pandemic caused by COVID-19 has destroyed the social fabric, as known to us, among many other things.

This study is limited in few aspects. Due to lack of time the sample size is small. A bigger sample group would have been able

to reveal more dimension of the crisis. For convenience of study, sample was taken only from urban area and suburban area. Therefore, problems faced by rural students are not discussed here. The study has not taken into account the differences between the psychological crisis of male students and that of female students, nor has any separate attention been given to identify problems of students coming from different income groups. In order to find out the exclusive effect of lockdown on the mental well-being of students, a comparative study should be carried out in post lockdown period. Further research can be conducted in these areas for producing a more accomplished account on the mental state of the future generation struggling to cope up with the pandemic.

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The Search of Safe Protein Source during the Pandemic of Covid Corona Virus

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Abstract

The conflict between vegetarian and non-vegetarian food eaters is a long standing issue though recently the vegetarian diets have gained an increase in popularity among people of Asian as well as Western countries. Vegetarian diets are associated with various health benefits as well as have no zoonotic disease spreading potential. It is believed that the vegetarian foods also have less impact on various life style diseases such as high heart ailments, hypertension, colon cancer etc. However, they lack some essential fatty acids in comparison with sea fish which should be supplemented. In the recent pandemic situation people are in search of a cheap and good quality food with rational price. During the ongoing pandemic these vegetarian food may be found to be easy to preserve as they have higher shelf life and easy to distribute as well as rational in price. These food are easy to cook and devour as well as digest and have no religious binding.

Keywords: Vegetarian, Animal based protein, Covid Corona virus, health, Vegan, Zoonotic disease, Wuhan.

Introduction

The emergence of novel corona virus in the Chinese city Wuhan made the scientific community of the world to think about a link between this disease and Wuhan animal wet market where snake, bat, cat, armadillo and other such animals are sold as a source of protein to the Chinese population. Genetic similarities were found with the virus which was isolated from pangolin with circulating pathogenic Covid- 19 corona virus (Zhang et al 2020). The process to obtain animal origin food lies in killing the animal or snatching away animal's right and this have been strongly

objected by many people. It is evident that obtainment and preparation of animal flesh, egg, milk have proved to be associated with various diseases namely anthrax, avian flu, bovine tuberculosis, brucellosis, cat scratch fever, mad cow disease, nipah virus disease, cryptosporidiosis etc. Naturally whole world is in search for an alternative protein rich balanced food which are safe to consume and equally acceptable with animal originated food in taste and nutrition. These vegetarian foods could be handled and distributed safely when compared with animal originated food.

Perspective of Animal Protein Rich Food

During the first half of the year 2020 the whole world is experiencing horror involved with covid -19 corona virus and almost all parts of the world is under lockdown. In this situation supply of safe food to human has emerged as a challenge. (Zhang et al 2020) It is well known now during the pandemic attack human require adequate protein to boost immunity to fight the disease naturally. Animal originated proteins served as major source of protein food to human kind from time immemorial, and at the same time a large section of the animal proteins are related with cardiovascular diseases, cancer etc. apart from the spread of various zoonotic diseases. So with the advancement of civilization human searched safe protein sources which can be devoured by human of all ages. It should be remembered that animal proteins have highly perishable shelf life and cannot be preserved for long time under refrigeration or other suitable process. This limitation makes it difficult for distribution of these items among people through public distribution system widely. Apart from this a large section of people in our country do not consume non vegetarian food as their choice.

Present day scenario regarding vegetarian food

Naturally search was begun to find alternative protein source which will be safe for human and will have longer shelf life and can be distributed through public distribution system. Among several vegetable based protein food the Soybean is the most promising one, beside soy based foods, various pulses, nuts, grains, quinoa, edible seeds also have a very good percentage of protein (Craig 2009). Beside protein rich food some vegetarian food are rich in essential fatty acids. Flaxseeds is

an excellent source of essential fatty acids soluble (viscous) and insoluble fibres, lignans, high quality protein and potassium lignans a phytoestrogen found in many oil seeds is believed to boost immunity and help to protect from certain cancers (Fraser 2003).

The various protein rich vegetarian food includes tofu, tofurky, leaf protein concentrate, nut roast, vegetarian bacon made from tempeh, wheat gluten made seitan, soy based meat extenders. The vegan meat is made from mixture of pea protein isolate, rice and moong bean protein, sunflower lecithin, etc. which is wonderful to consume and full of nutrition and have immune boosting potential. (Fraser 2003) The vegetarian protein based food also have mouth-watering taste as reported by various consumers and the vegetarian originated food have very acceptable name like veg burger, veg bacon, mock duck, veggie burger etc. The companies of Western countries like Allma foods, Beyond Meat, Gardien, Boca Burger, Burger, Linda McCartney foods, Tofurky, Light life, Bean feast are a few example who are growing in terms of their business every year. Gradually these foods are gaining importance and acceptance among people throughout the globe. Food marketed by them are nutritious and equally acceptable in taste and smell with food made from animal sources. The most beneficial information is that all these food are free from spreading any viral, bacterial, protozoal diseases (Davey et al. 2003).

Conclusion

This pandemic is an eye opener for human beings regarding the choice of food. People around the globe are changing their food habits from non-vegetarian to vegetarian diets. Various companies in western countries have products designed

to simulate chicken, beef and pork sausages, and restaurant chain is establishing to provide such environment friendly food. These food may be found little costly initially but research and development is going on to reduce cost. According to several LCA (Life Cycle Analysis) vegetarian food generates much less greenhouse emissions, requires less energy and they have less impact on water scarcity and land use (Craig 2009). A growing volume of information and scientific evidence indicates that the wholesome vegetarian diets offer a clear and specific advantage compared to other food of animal origin. The beneficial effects arise from less intake of saturated fat, cholesterol as well as greater intake of dietary fibres, vitamins, carotenoids and other phytochemicals. Since the vegetarians consume a wide variety and divergent foods, naturally a selection of food is necessary to make the diet balanced in terms of protein, lipid, carbohydrates and other nutrients. Several studies have indicated that the vegetarians suffer from nutritional deficiencies due to unplanned

meal and poor meal planning. The shift to vegetarian diets have economical, ecological and social values. The persuasion of the above mentioned aspects is a subject of a new thought of nutritional ecology which promotes sustainable developments. The choice is yours.

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Changing Nature of Multitasking : A Look through Urban Working Womens' Chores during COVID 19 Pandemic

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Multitasking is nothing new to our country. In fact, the process of multi-tasking has become an art in our day to day lives. Both men and women involve themselves in multi-tasking, working for their livelihood as well as for their family. The Oxford Advanced American Dictionary defines multi-tasking as, "the ability to do several things at the same time." Webster's Dictionary defines multitasking as, "the performance of multiple tasks at one time." Multitasking also involves efficient time management, required for completion of multiple tasks within the stipulated time, at which women have proved themselves. However, the concept is not new to us as it forms a part of our socialisation process, especially for women. But it must be mentioned here that not only in India but all over the world, women are into multitasking, balancing their private and public spheres with ease.

In India, women perform multitasking both in the rural and urban spheres, though the nature of multitasking of the rural women differs widely from that of the urban women in India owing to the difference in mindsets of rural and urban India. The present article tries to look into the sudden change in daily chores of urban working women. Urban working women, for the purpose of this

paper will mainly mean urban office going women, teachers and those running small businesses. To look into the change that has taken place during the Covid 19 pandemic, a look through what the normal situation had been is necessary.

In rural India, still today, ascribed status plays a dominant role in society and women are socialised to undertake multitasking as their regular activity to get married to a family with a high status (ascribed). As a part of multitasking women in rural areas, therefore maintain their households, prepare food that includes the arrangement of fuel (in the form of cow-dung cakes, wood, and dry leaves etc.) as well, fetch water from far and nearby waterbodies, whichever is available to them, wash clothes, clean cattle sheds, wash utensils, attend guests with a smile and offer them tea and snacks during any time of the day, monitor domestic helps and cattle keepers if any on top of performing all the religious fasts, pujas and offerings for the well being of the family. They do these chores every day, morning to night, mostly without any recognition and often under pressure of gender discrimination but they do it very spontaneously. It may seem a mammoth task to others though, still in the greater

part rural India, women are encouraged to take up and master the art of multitasking rather than taking up education and looking for jobs, to be on their own.

In the urban areas, cities and metropolis, achieved status is held in high esteem than the ascribed status. Here, the road to success determines the position of a person in the society. Unlike rural societies, gender discrimination is comparatively at lower levels. Women, in these areas, therefore, get the chances of better education and higher education. They are socialised to stand and maintain themselves on their own, sustain their own livelihood and work and earn side by side with their male counterparts. The women can marry the person of their choice and status and working couples are the trend of the metropolis now-a-days. Household chores, too, are equally divided between the man and wife as both are parts of their private and public space equally, unlike their rural counterparts. Thus, we find outsourcing of most of the familial chores with the appointment of cooks, household helps, food delivery man, local laundry and grocery shop owner and the driver, who carry out the lion's share of the regular household tasks. On the other hand, workplace responsibilities, monetary responsibilities and the accumulation of quality time to be spent with friends and family, becomes the onus of working women in urban areas.

The outbreak of the Covid 19 Pandemic worldwide marks a watershed in the human history. The havoc it brought through its dangerous contagion and death toll surpassed all other epidemics the world has faced till date. The absence of a proper vaccine to deal with the virus made it even more dangerous. In a country like India, where the population itself is a grave concern for the government, the toll of the virus is expected to be greater as well. To add to the

devastation, two deadly cyclones, namely Umfaan and Nisarga, hit West Bengal and the coasts of Maharashtra, causing huge loss of life and property, adding to the miseries of the people. As the country tried to cope up with the burning crisis in combating the virus attack by announcing lockdown and health directives to be followed, we are becoming acquainted with the words like quarantine and physical/social distancing. Sudden closing down of offices, schools, organizations, transports, air traffic, markets, shops, made normal life come to a thaw. With three months of lockdown, many organizations were forced to closure, and many people lost their livelihood. In this situation of "New Normal" as it is being called now, newer things like face shields, face masks, use of sanitizers, gloves have crept into our daily use. The pressure of the pandemic, as time progresses, have also made us extremely cautious, fearing contagion.

In such a situation, the lives of people are sure to get affected and so they got affected too. There has come a sea change in the lives of individuals, especially women. In rural areas, owing to this pandemic, agriculture suffered a lot, and as it is the main occupation of a large percentage of population of rural India, poverty, and shortage of food was apprehended. As for the womenfolk, their daily chores remained more or less the same except mixing with others at the local meeting centres, like the pond or the tube wells stopped due to the fear of contagion. The husbandmen having lost their jobs, sometimes, vent their anger on the womenfolk who have to bear the brunt. Level of consciousness being low, people in rural areas including the womenfolk and the children are not that much aware about the severity of the disease. Governmental authorities are trying to spread the awareness about the disease, and the norms of the "New

Normal" in these rural areas, but much remains to be done.

In the urban areas, the picture is a bit different. Here too, the onset of the pandemic made its own effects felt at the socio economic levels. With the shutting down of organizations, offices, firms, and educational institutions, working women have quite suddenly lost their regular balance between the private and the public at the same time they had to concentrate on the directives of the "New Normal", adopt the guidelines and equipments of regular use as safety measures from the pandemic, delve in to regular sanitizing and keeping the hygiene and health of the family in good condition. As for the teachers, with the educational institutions remaining closed, they have to take recourse to the online classes and also get used to the technologies and online techniques of taking regular assessments of the students. The ones not so conversant with these techniques, finds it really hard to get used to the online mode, that too all on a sudden. Therefore, on the one hand, adapting to the present situation as well as bearing the pressure to keep the financial security intact, has created a deep sense of insecurity among them. As for the office workers, many continues with their job by working online from home. (It is worth mentioning here that after the cyclones have gone, connectivity was left devastated almost for a week. IT sectors, online classes of students and other important assignments suffered extremely badly). As for others, they faced financial insecurity as many small organisations find it difficult to pay their employees in this lockdown period owing to the loss incurred, due to closures. Those who owned small businesses too had to bow down under the pressure of this Pandemic. With the shops and markets closed, neither the goods were sold, nor the stock replenished. Moreover, those who had rented shops had to bear the

rent without earning. Many shops therefore closed down, leaving their owners jobless.

Within the house, the services of the cook, domestic helps, food delivery boy, baby sitters had to be stopped due to the fear of infection. Now, most working women found their private and public space muddled together. Thus, cooking, washing, cleaning, taking care of children and their education online along with regular work from home has given the urban working women a multitasking that she was never used to. Parallely runs the pressure of giving salaries to the domestic helps and others, who otherwise will search for jobs at some place else. Many household workers have lost their jobs during this pandemic and have fallen into dire misery, but that is not the focus here. Since incomes of many households became insecure, they in turn, had to terminate their household helps. Thus, adversities inside and outside the house made the process of multitasking really challenging for the working women. Psychological problems, domestic violence, and financial hardships are the three most vital challenges faced by women in these Covid 19 Pandemic days.

The New Normal may give rise to many other problems, it may solve some problems arising from the pandemic too, nothing can be prophesied at this early stage. However, one must not stop saluting these womenfolk who are fighting out the adversities with all their might. Multitasking has helped them in their battle against the Pandemic. It gives us great pleasure to see these empowered womenfolk fighting their respective battles in their own ways.

Time is a great healer, and with time, the task which appears herculean now, will definitely become a daily mundane chore. Multitasking along new normal lines will definitely help them tide over this bleak situation. Looking eagerly towards that silver lining.

Fight Corona with Friendly Flavones

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Introduction

The COVID-19 caused by a novel coronavirus has created a global crisis now-a-days ranging from human health disorder and deaths to massive economic slowdowns. Originating from Wuhan, China this viral disease has taken the lives of innumerable number of people. The transmission pattern of this pandemic disease involves direct contact, droplets and airborne routes. The characteristic clinical symptoms of COVID-19 include fever, chills, cough, tiredness, respiratory troubles, chest pain, diarrhea, headache, loss of taste and smell of the affected. In chronic stage the patients suffer from shortness of breath and alveolar damage. Apart from the worst affected epithelial cells of respiratory track, mucosal cells of the intestines, neurons of the brain, tubular epithelial cells of the kidneys and several types of immune cells also get affected during the course of illness. Hence, it is the urgent need to encounter the virus by preventing its further spread. Since the effectiveness as well as production of different newly-engineered vaccines is not so promising till now with respect to the vast population of our country, it would be the safest way out to prevent the virus through different means from affecting the human body. Scientists are still investigating pre-existing drugs that may be

repurposed for the treatment of COVID-19. Remdesivir was the first drug approved by FDA for treatment of COVID patients. This drug although help in reducing viral replication but for recovery of moderate to severe COVID patients combination of Remdesivir with oxygen therapy, vitamin supplements, steroids and blood thinner is found essential. The anti-malarial drug chloroquine and hydroxychloroquine are polymerase inhibitors and hence it is thought that application of these drugs can keep the virus out of host cells through blocking glycosylation of host receptors and breaking down the production of viral proteins. Although the initial studies looked promising, but there were flaws too. Two HIV drugs lopinavir and ritonavir are also well-known protease inhibitors and thought of their functions against 3-chymotrypsin-like protease of coronaviruses. But clinical trials were found not so promising. Apart from social distancing and self-hygiene as suggested by the WHO, Governments and different NGOs, exploration of effective antiviral agents that are easily consumable through dietary intake has become quite essential. Through this article a probable chemically viable dietary solution that can resist the viral reproduction within the host cell have been suggested.

Structural features of SARS-CoV-2:

Coronavirus (CoV) belongs to a family of positive single- stranded RNA virus. Among the known said variants of these viruses 229E, NL63, OC43 and HKU1 are known to infect only humans while MERS, SARS got transmitted to and among humans from animals [1,13]. But the recent threat emerges while in December 2019, another novel variety of coronavirus named as 2019-nCoV outbreak from Wuhan, China and is known to be transmitted from animals to humans causing significant mortality [2]. Coronaviruses have lipid enveloped virions that measure around 12 nm in diameter. They are crownlike in shape due to the presence of club-shaped glycoprotein spikes in their lipid envelopes. The two subunits of glycoprotein(S) S1 and S2 promote receptor binding and membrane fusion respectively. Viral entry in to the host cell is mediated by a receptor of host cell named ACE2 (angiotensin - converting enzyme 2). Host susceptibility is primarily governed by the affinity of receptor binding domain of S protein against ACE2 receptor[3].

Similarities and differences between SARS-CoV and SARS-CoV-2

Both SARS-CoV and SARS-CoV-2 belong to zoonotic coronaviruses within the genus Betacoronavirus. The receptor binding domain (RBD) sequence of SARS-CoV-2 (2019-nCoV) is 76% similar with that of SARS- CoV and the genome sequence show 82% nucleotide identity [3]. The main protease between the two viruses is 96% similar and the symptoms of affected patients by these two viruses are quite similar [3]. Patients infected by SARS-CoV-2 experience 'cytokine storm' where level of cytokines in the body get enhanced. So, inhibition of those over expressed cytokines can be a potential therapeutic route to fight

human coronavirus. But there are several differences too between SARS-CoV and SARS-CoV-2. SARS-CoV-2 is even more dangerous as asymptomatic hosts can spread the virus through respiratory droplets.

Effects of SARS-CoV-2 on human health

Apart from lung infection recent studies focus on the infection of human coronaviruses in other organs like heart, liver, kidney which widely express the ACE2 receptor. These lead to multiple organ damage along with severe lung infections. Multiple studies are there reporting an increased inflammatory response in the endothelium, apoptotic bodies in heart, lungs; necrosis of liver cells; endotheliitis in the heart, liver, kidney etc [4]. It suggests that antiviral treatment alone can't be sufficient and a combination of drugs including anti-inflammatories may be more effective for COVID patients. In May 26, 2021 FDA authorizes for additional monoclonal antibody therapy sotrovimab for treatment of COVID-19 patients. These antibodies are laboratory made proteins that can mimic the ability of immune system and fight off harmful antigens from viruses. This therapy is effective for mild to moderate COVID-19 patients who are at high risk for progression to severe COVID-19 but can have worst effects if administered to hospitalized patients requiring high flow oxygen or mechanical ventilation.

Mode of infection by SARS-CoV-2 within host cells and identification of therapeutic targets

In taxonomical terms, corona virus belongs to the family coronaviridae. Its genetic material is single stranded RNA, which can act as m-RNA and eventually synthesize proteins. Therefore, an effective drug target to hinder proliferation of viral genome can be the main protease,

3- chymotrypsin-like protease [3CLpro] and papain-like protease [PLpro] [3]. Numerous studies are there where plant extracts, isolated compounds and secondary metabolites have been tested against these proteases. These proteases lay major role in processing the polyproteins that get translated from viral m-RNA. These target proteins are crucial for viral replication and hence provide valuable targets for potentially inhibiting COVID. It has been previously reported that the polyphenols from *Broussonetia papyrifera* can act as coronavirus protease inhibitors. Researchers have shown that among ten isolated compounds papyriflavonol was the most potent inhibitor of PLpro [5]. Experimental evidences are there regarding anti-SARS-CoV 3CLpro effect of *Isatis indigotica* root-derived compounds and several herb-derived phenolics like aloemodin, quercetin, naringenin and hesperetin using both cell-free and cell-based cleavage assay [6]. Linlin Zhang et al. suggested an α -ketoamide inhibitor as an effective protease inhibitor by X-ray crystallographic structural analysis of native anti-SARS-CoV 3CLpro protease [7]. The availability of crystal structure leads to computational screening of compounds which have shown activity against 3CLpro protease and other similar compounds in order to identify possible lead molecules against COVID-19. As per reports, the ACE2 receptors are the same for both SARS-CoV and SARS-CoV-2. So previously reported SARS-CoV inhibitors can efficiently inhibit SARS-CoV-2. Based on molecular docking study scutellarin, hesperetin, nicotianamine and glycyrrhizin have been identified as potential molecules to inhibit ACE-2 receptor activity. In studies of potential lead compound with antiviral activity, pre-clinical toxicity studies are quite important before proposing a drug

candidate. For enzymatic inhibitors, three criteria are checked namely specificity, kinetic-characteristics and concentration-response. First of all enzyme activity needs to be specific to the selected targets. Pan-assay interference (PAINS) is done to rule out false positive compounds in this regard. Secondly, for the test system the concentration range and response should be proper and relevant. Kinetic assessment is also required to identify kinetic properties and mode of inhibition.

Southern African plant sources for probable potential leads

Abietane diterpenoids, triterpene, glycosides and chalcones are several prominently identified compounds as potential leads against COVID-19. They belong to common class of natural products abundantly occurring in Southern African plant species [3]. Southern Africa contains a large biodiversity as well as natural product diversity and that provides a source of compounds to be screened against SARS-CoV-2 target proteins. In Southern Africa a major proportion of population relies on plant extract as traditional medicine for health care. Southern African plant extracts are traditionally used in common cough, cold and influenza. So, these compounds need to be tested extensively against human corona virus to identify potential leads. Additionally extensive toxicity studies and in-vivo testing is still required to investigate pharmacological use of these medicinal plant extracts.

Use of natural products against corona viruses

Considering the the key interacting residues of the main protease, here flavone based compounds have been suggested as a potential lead anti-viral agents by virtual screening from a set of available group of

organic compounds. These compounds interact with receptor by H-bonding and Pi-stacking interactions.

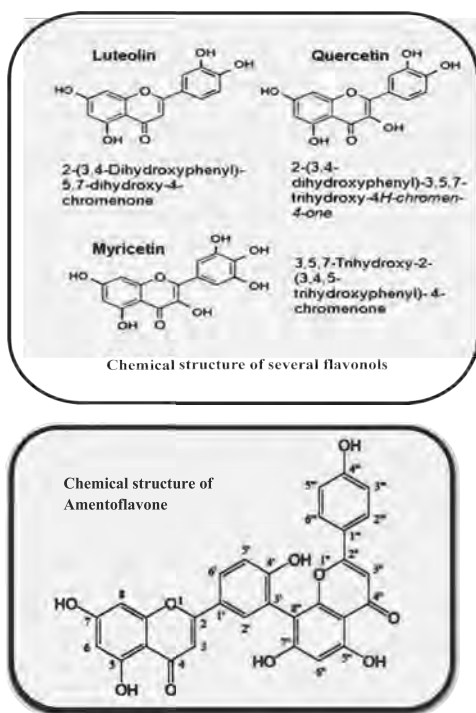
Flavones have characteristic 2-phenyl-chromene-4-one ring structure. Several well-known structurally related flavones are Luteolin (2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-4-chromenone), quercetin and myricetin. These compounds act as good anti-oxidant and free radical scavenger due to their number and position of hydroxyl groups [8]. From chemical intuition it can be said that among the three mentioned flavonols, Luteolin is the most potent due to its most activated carbonyl functional group. Hence, Luteolin and associated Flavones can be thought of preventive measure of COVID 19. These compounds are mainly found in herbs and sometimes suggested as dietary supplements. Luteolin is not so toxic and it has the ability to cross blood brain barrier and capacity to suppress neuroinflammation. Besides, Amentoflavone and Puerarin are also two proposed potential leads which show lowest binding energies in molecular docking studies [9].

Study shows that natural products must play a vital role as therapeutics in current COVID-19 scenario. Plant products like fruits and vegetables are the good source of various metabolites that have therapeutic values as anti-viral agents. They can arrest viral proliferation within the host cell either by inhibiting receptor binding and membrane fusion or by modulating intracellular replication, transcription and translation processes of viral genome. The primary purpose of this article is to search for efficient inhibitor of 2019-nCoV that are easily consumable as fruits and vegetables in our day to day life and having no side effects as such. Therefore a group of flavonols and flavonol rich foods have been recommended here to combat COVID-19.

In order to boost up human immunity

against COVID 19, the nature-derived flavonols can be consumed through dietary intake as preventive measures. Luteolin is found in celery, artichoke leaves, parsley, peppers, olive oil, rosemary, thyme, peppermint, sage and lemons [10]. All types of red, green and purple-pigmented plants generally contain Quercetin. Some good sources of this flavonol are- Apples, Red wine, peppers, blueberries, blackberries, tomatoes, spinach, cruciferous veggies including cabbage, broccoli and sprouts, citrus fruits, cranberries, asparagus, raw red onion, olive oil, beans and even green tea. Another related flavonol, Myricetin has been found in plenty in dock, cranberry, sweet potato leaves, beans, chilli green, blueberry, lemon, blackberry, spinach, garlic, letus root, cabbage, red wine, broccoli, mango, cherry etc. Amentoflavone ($C_{30}H_{18}O_{10}$) is a common biflavonoid which is chemically named as 8-[5-(5,7-dihydroxy-4-oxo-4H-chromen-2-yl)-2-hydroxyphenyl]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-chromen-4-one. It naturally occurs in a large number of plants. The primary sources of this compound are the plants of Calophyllaceae, Cupressaceae, Clusiaceae, Euphorbiaceae, and Selaginellaceae families, and Calophyllum, Selaginella, Garcinia species etc. [11]. We can consume this bioflavonoid as essential oil and plant extract derivative [12]. Puerarin [7-Hydroxy-3-(4-hydroxyphenyl)-8-[(3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]chromen-4-one] is a known isoflavone found in a number of herbs and plants especially in the root of Pueraria (commonly known as Kudzu plant). By consuming these flavonoids abundant foods in regular diet the human immunity can be boosted up to fight against COVID 19. Since all of these flavonoids are phenolic compounds in nature, regular intake of these compounds at a moderate rate through consumption of

flavone-rich natural fruits, vegetables and herbs is quite essential for all of us in the present scenario.



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COVID – 19: Despair and Hope (Migrant Crisis)

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It is already a cliché to say that 2020 would be the beginning of a new era, which divides history into pre and post covid-19 pandemic periods. This divide is so sharp and stringent that could not be imagined by the globalised new world order which erupted after the end of decline of Soviet Union or Second World War. The pandemic persists for about a year or so. It would have already caused enough ruptures to demand major readjustments in the way we look at the World, do things for the present, and imagine the future. The decline of the economy and crisis of economy is very open and clear. This open and clear decline is like x ray which meticulously exposes our stigmatised skeleton of long persist discrimination. Various type of discrimination is exposed by these pandemic. This discrimination is palpable in our society in normal time but we are indifferent about it. Migrant worker is a category by which these discrimination and indifferent social consciousness reflected mostly.

Definition and Governments initial steps:

To combat coronavirus India government has imposed an unprecedented national

lock down. From 24th march of 2020 our country entered into a pandemic preventive measure of lock down¹. Social distancing became the new normal. While travel, tourism, aviation and other normal habits of life have been constrained to prevent the transmission of the virus. This situation has thrown a spotlight on the condition of internal migrant workers. The census of India defines a migrant by place of birth as a person who is enumerated in a place (village or town), which is different from their place of birth². You will find them everywhere in our cities hanging from the scaffolding of buildings, carting heavy loads in factories, guarding our homes, selling fruits and vegetables. Yet they remain invisible, a workforce populated mostly migrants from rural India, and contributing an estimated 10% to our GDP³. It took a pandemic and subsequent lockdown to thrust them into the national consciousness and shake our collective conscience. As various national - television played out images of desperate migrants on a loop - an exhausted child asleep on his mother's suitcase as she dragged it alone - India came face to face with a tragedy of an unimaginable scale. It was enough for

the Supreme Court to ask on May 26 that the central and state governments submit a report in two days on their action to help migrant workers. On May 28, the union government said it had sent 9.1 million migrant workers home between May 1 and May 27- five million by train and 4.1 million by road⁴. The apex court has issued detailed guidelines for the centre and states to follow to transport migrant labour. This problem started from the day of declaring national lockdown. A section of people and intellectuals justly believe the abrupt imposition of national lockdown on 24 March within the notice of four hour nakedly exposes the grim reality of migrant worker life. Without the lockdown it is impossible for our society to understand the vulnerable condition of migrant worker life. Some government officials admit they lacked clear data on migrant numbers and did not think the initial three week lockdown would result in an exodus of a scale that Indian have not witnessed since the tragedies of partition. But many experts do not believe the argument that the government did not have migrant numbers. Many of these workers are circular migrants- who came to cities seeking work in non- agricultural seasons-and would have returned to their native places after the monsoon. According to the Indian express report- “Circular migrants go back in June-July. Railway data shows that around 4 million people move around the time. The lockdown advanced their return by a month or two. It is surprising that the government did not anticipate this return. Several studies show that 80% of circular migrants lack identity and domicile documents. Circular migrants are also invisible because they are recruited by labour market intermediaries such as contractors and brokers and this problem is very pervasive in rural India.

These people are basically day labour so they have very little savings in their hand. Rigid lockdowns snatch their earnings. Government treated this section of people through the prism of food. Their families who reside in rural India experience insecurity but not scarcity of food because after the universal ration system a major portion of these families enrol in the public distribution system. Our policy makers think only food can provide security to these families. Children and ailing families need different kinds of support beyond the food. Lost income of the family destructs the special needs of children and ailing members of the family. Children had some special needs which are not directly related with nutrition. I met a man who wants money not for food but for cold drinks for his six year old son because cold drinks are an essential element for his son’s happiness. Migrant workers lose income but their families get ration through the public distribution system, which is not enough to secure the necessities of their children.

Poorly planned policy

The government had declared covid-19 a notified disaster. Very simply, if the government had given a window of five to seven days for the migrant workers as an exception to leave for home in special buses or trains in beginning of the lockdown (later they started the shramik special trains), something akin Bangladesh had done before imposing a similar lockdown, we could have avoided many of the terrible scenes witnessed across the country during the four phases of lockdown. The government could have, in the very beginning, given a week window say from the end of Janata curfew on 22 March 2020 to the following for the migrant workers to leave their destinations for their homes in

special transport facilities⁵. Many experts think just this simple measure could have one a lot to alleviate the panic that set in amongst the migrants.

The terrible scenes of distress, however, caught the nation's consciousness and put pressure on authority to act. It was in this context that the government announced a slew of schemes under the moniker "Atmanirvar Bharat" or "self-reliant India" worth 20 lakh crore on 13 May 2020⁶. It was proposed to stand on five pillars-economy, infrastructure, technology, demography, and demand. The second tranche of the scheme focuses on migrant workers and small farmers. Additionally on 14 May 2020 it was announced that 1000 crore would be distributed to the states for migrant welfare under the p.m citizen assistance and relief in emergency situations fund. India has 28 states and nine union territories; it is unclear how this division will take place. Under the ambit of the Pradhan Mantri Garib Kalyan Yojana, food security was announced for a likely eight crore migrant worker who are outside the ambit of national food security Act 2013 or those without ration cards, who will be provided with 5 kg rice each and 1 kg of pulses to all members of the family for the next two months⁷. An amount of 3500 crore has been allocated for this by the centre and the states have been directed to implement it. On 20 June 2020, the government of India announced Garib Kalyan rojgar Abhiyan to address the employment crisis of the migrants returning home. The programme is predominantly a rural public works scheme and an endeavour of 12 different ministers and departments.

Conclusion

The implementation of all these schemes requires the overcoming of various logistical hurdles. For instance,

the disparity in the distribution of public distribution system shops across the country and the added demand will lead to a deficit in food grains in those shops where the demand is high. Moreover, it should be noted that the eight crore beneficiaries also translate into eight crore families. According to the census 2011, the average household size in India is 4.5, accounting to a total of about 36 crore individuals dependent on migration. Given the average nutritional requirement of 2400 calories per person per day in rural areas and 2100 calories in urban areas, it should not meet the nutritional requirements of the entire family⁸. Migrant workers have traditionally been in the periphery of government policymaking as they are an invisible vote bank. A large number of them cannot cast their vote in their hometowns owing to the nature of their work. They have also been left out of the purview of traditional labour unions and have had no protection from exploitation or vulnerability. But we have seen instances of migrant labour organizing collectively and pressuring governments in order to get their voices heard. But the crisis gave us a chance to seriously contemplate the issue of the migrant worker problem that will be helpful for our future. Before this period of crisis our collective consciousness just ignored the existence of this migrant worker. This ignoring negatively impacted the proper use of human resources. In normal time this worker played a vital role behind the hike of our G.D.P number. Proper use of migrant workers helped our nation to improve the condition of our economy. But our government missed a huge opportunity to announce at least an ex gratia payment to every migrant worker in the form of a cash transfer on an emergency basis. Migrant workers

have traditionally been in the periphery of government policymaking as they are an invisible vote bank. A large number of them cannot cast their vote in their hometown. They have also been left out of the purview of traditional labour unions and have had no protection from exploitation or vulnerability. Our policy maker needs to deal with this “invisible migrant worker crisis”.

End Note

1. “The migrant mess” Koushikdeka, India today, june 6,p15
2. The Hindu, may 27, 2020, p 6
3. Ibid p 7
4. “ Food system in the Time of covid 19”, Reteshkumar, Abhishek Sharma, Economic and Political weekly, April 11, 2020 , p 13
5. Ibid 15
6. Ibid 16
7. The migrant mess” koushikdeka, India today, june 6,p18
8. The Indian Express, june20, p 6

Covid-19 – An Enigma of 21st Century

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A report published by BBC World on 1st April, 2017, deliberating on the views of experts from the world of science and technology regarding '*the societal challenges that matter in 2017 and beyond*' discussed exactly the very issues that we are facing today in the form of Covid-19 pandemic (<https://www.bbc.com/future/article/20170331-50-grand-challenges-for-the-21st-century>). In this report, several world renowned scientists had pointed out the importance of development of global coordination amongst countries to fight pandemic crisis against infectious disease and also had emphasized on the reluctance of most countries to fund research and development. Ironically, in accordance with its date of publication the discussion remained confined within the team of experts and as proclaimed did not find any significance to the economy driven scientific market until a microbe named Sars-CoV-2, the virus that causes Covid-19, made its impact. The outbreak of coronavirus disease 2019 (Covid-19) has not only created a global health crisis but has also threatened the very basic nature of humanity by requiring physical/social distancing that is refraining people from doing what is inherently human, which is to find solace in the company of others. Not only does the rate of contagion and patterns

of transmission threaten our existence but it has a deep impact on the way we perceive our world and our everyday lives today.

Coronaviruses have been in the news in the recent past for outbreaks of deadly illnesses like Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) but their impact has been mild compared to the global havoc unleashed by Sars-CoV-2, the coronavirus that is causing the Covid-19 pandemic. In the past few months approximately 10 million have been affected with 500,000 deaths already and still counting as on end of June 2020. It is an extraordinary achievement for a spiky ball of genetic material coated in fatty chemicals called lipids, which is 80 billionths of a metre in diameter. Sars-CoV-2 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. According to WHO report, these droplets are too heavy to hang in the air for long time, and quickly fall on floors or surfaces. One can be infected by breathing in the virus within close proximity of someone who has COVID-19, or by simultaneously touching a contaminated surface and then his eyes, nose or mouth. The mighty human race has been challenged by a very humble assailant.

Our knowledge about the Sars-CoV-2, the

virus that causes Covid-19, is also limited. Its existence was unknown to science a few months ago and today it is the subject of worldwide study on an unprecedented scale. Vaccine projects are proliferating, antiviral drug trials have been launched and new diagnostic tests are appearing. In order to understand the present scenario it is important to take a quick recap of the initial timeline of events and how and where it started to spread worldwide before delving deeper with some elementary analysis and a brief insight into the nature

and pathogenicity of the virus leading to some unresolved questions, the answers to which the whole human race is awaiting eagerly.

Timeline of Events before Covid-19 entered India:

The entire data set has been collected from the WHO website (Daily Situation Reports). Data analysis has been done using MS Excel tools while some graphs have been represented as it appeared in the WHO website (<https://www.who.int>).

Covid-19 Facts and Figures: Worldwide scenario and Indian perspective

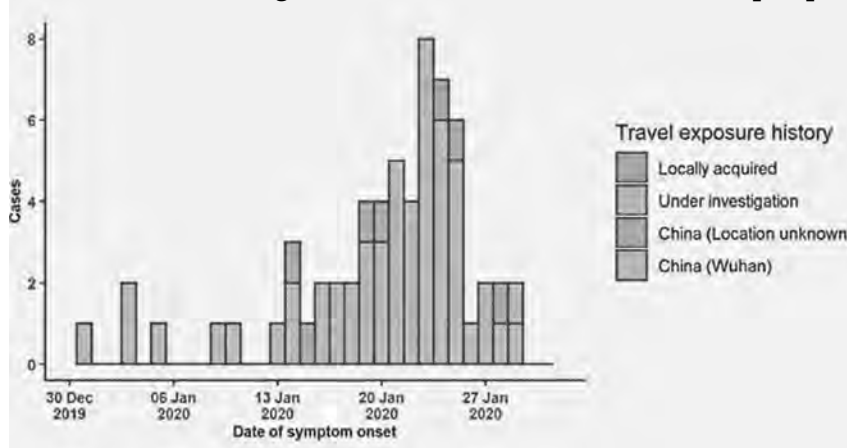


Figure I: Epidemic curve of 2019-nCoV cases (n=62) identified outside of China, by date of onset of symptoms and travel history: 31 January 2020 (<https://www.who.int>).

- On 31 December 2019, the WHO China Country Office was informed by Chinese Government of novel cases of pneumonia with unknown etiology (unknown cause) detected in Wuhan City (Hubei Province of China).
- From 31 December 2019 through 3 January 2020, a total of 44 patients with pneumonia of unknown etiology were reported to WHO by the national authorities in China. The Chinese scientists were unable to identify the causal agent.
- The Chinese scientists reported about the identification of a new type of coronavirus, which was isolated on 7 January 2020.
- On 11 and 12 January 2020, WHO received further detailed information from the National Health Commission China that the outbreak is associated with exposures in one seafood market in Wuhan City of China.
- On 12 January 2020, China shared the genetic sequence of the novel

- coronavirus to the whole world for use in developing specific diagnostic kits.
- On 13 January 2020, the Ministry of Public Health, Thailand reported the first imported case of lab-confirmed novel coronavirus (2019-nCoV; now called SarsCoV2) similar to the one identified from Wuhan.
 - As of 20 January 2020, 282 confirmed cases of 2019-nCoV have been reported from four countries including China (278 cases), Thailand (2 cases), Japan (1 case) and the Republic of Korea (1 case).
 - Cases in Thailand, Japan and Republic of Korea were exported from Wuhan City, China; first confirmed cases of 2019-nCoV acute respiratory disease in Finland, India and Philippines; all had travel history to Wuhan City.

A report from a renowned English newspaper compares the 'Covid-19 Facts and Figures: Worldwidescenario and Indian perspective' (Fig 1). Figure 2 clearly depicts how from its site of origin or detection, the virus has made inroads rapidly in several countries through human contact.

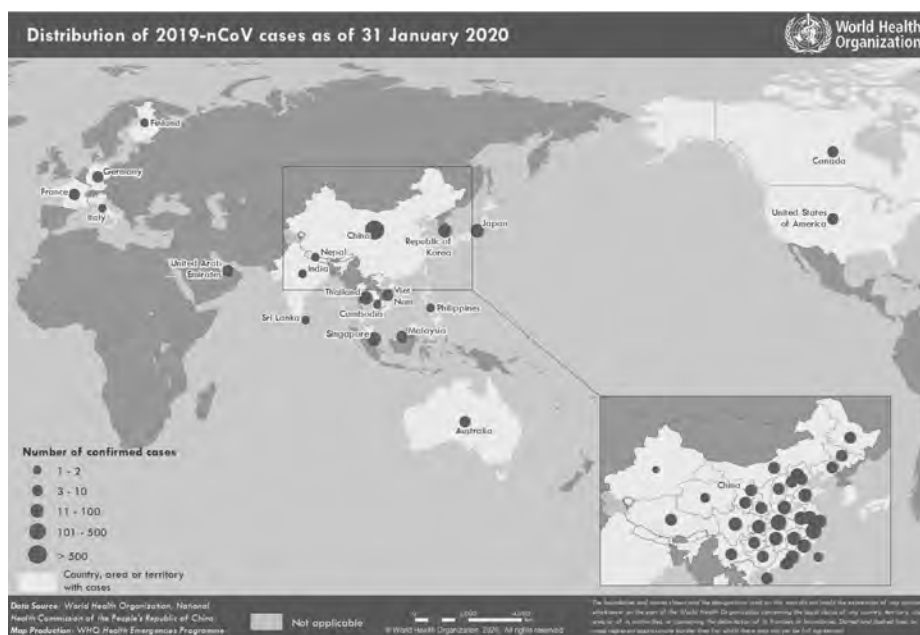


Figure 2 Countries, territories or areas with reported confirmed cases of 2019-nCoV. : January 2020 (<https://www.who.int>).

By the end of February 2020, 85,403 confirmed cases were reported worldwide with the bulk of patients (79,394 to be precise) reported from Hubei province of

China. The world-wide distribution graph shows a meagre spread of the virus in India. (Fig 3) {WHO Situation report 40 (<https://www.who.int>)}.

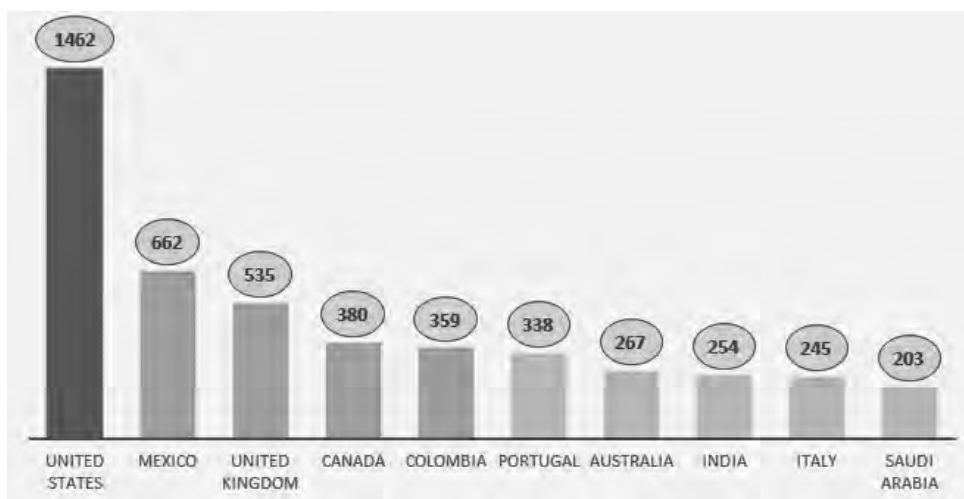


Figure 3: The world-wide distribution graph of spread of Covid-19 as on 27th February, 2020 (<https://www.who.int>).

India had reported its first case on 31st January, 2020 and within a span of 41 days it had spread in 12 states and 18 cities/districts reaching half century. The Government of India, took some unprecedented emergency measures and went on with a series of lockdowns as mentioned below enforcing several regulations on daily life.

- Phase 1: 25 March 2020 – 14 April 2020 (21 days)
- Phase 2: 15 April 2020 – 3 May 2020 (19 days)
- Phase 3: 4 May 2020 – 17 May 2020 (14 days)
- Phase 4: 18 May 2020 – 31 May 2020 (14 days)

A graphical representation of the data, when India went into lockdown, shows that the spread of the covid19 disease in India was much lower than most of the European and Asian countries {Graph taken from: Explained: The rate of COVID-19 spread in India, [The Indian Express April 2, 2020] (Fig 4)}.

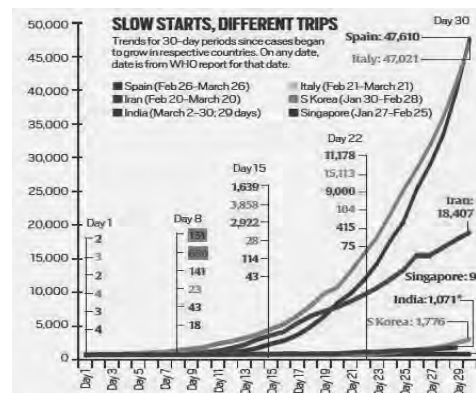


Fig 4. The rate of COVID-19 spread in India, [The Indian Express, April 2, 2020]

A detailed comparative analysis of percentage of infected population of the world at almost end of phase 4 of lockdown reveals that in India only 0.01% of the total population was infected (Figure 5)(Table 1). Most of the scientists, however, were apprehensive about the number based on the fact that per day testing (as per ICMR data) was far less compared to the advanced countries during the same tenure.

Table 1: Data of total infected population and Total population in some major countries of the world as on 24.05.2020 (<https://www.who.int>).

Country Name	Total Population	Total Confirmed cases
South Africa	5,93,08,690	21343
USA	33,10,02,651	1568448
Brazil	21,25,59,417	330890
Canada	3,77,42,154	82892
Iran	8,39,92,949	133521
Saudi Arabia	3,48,13,871	70161
Pakistan	22,08,92,340	54601
Russian Federation	14,59,34,462	344481
The United Kingdom	6,78,86,011	257158
Spain	4,67,54,778	235290
Italy	6,04,61,826	257158
France	6,52,73,511	142173
Germany	8,37,83,942	178281
Turkey	8,43,39,067	155686
India	1,38,00,04,385	131868
Bangladesh	16,46,89,383	32078
Indonesia	27,35,23,615	21745
China	1,43,93,23,776	84525
Singapore	58,50,342	31068
Japan	12,64,76,461	16550

In order to get a clearer picture of the worldwide spread, as well as, to understand the peculiar nature of the virus to some extent, a comparative analysis of the worldwide spread over the period of 24.05.2020 to 15.06.2020 was done by the authors (Table 1) (Fig 5).

Firstly, a comparison of the countrywise percentage of infected population distribution was calculated with the data available with WHO (Situation report:125, 147; <https://www.who.int>) on 24.05.2020 and 15.06.2020 (Fig 6) followed by the mortality rate in these countries (Fig 7 A). Data as on 24.05.2020 clearly show that while USA (30%) contributed the largest infection toll worldwide, only 2.5% of infection came from India (Figure 6). Interestingly in a span of 20 days USA shifted from being the highest contributor worldwide to a much lower position owing to the fact that in most countries like Brazil, Russia, South East Asian countries the numbers soared.

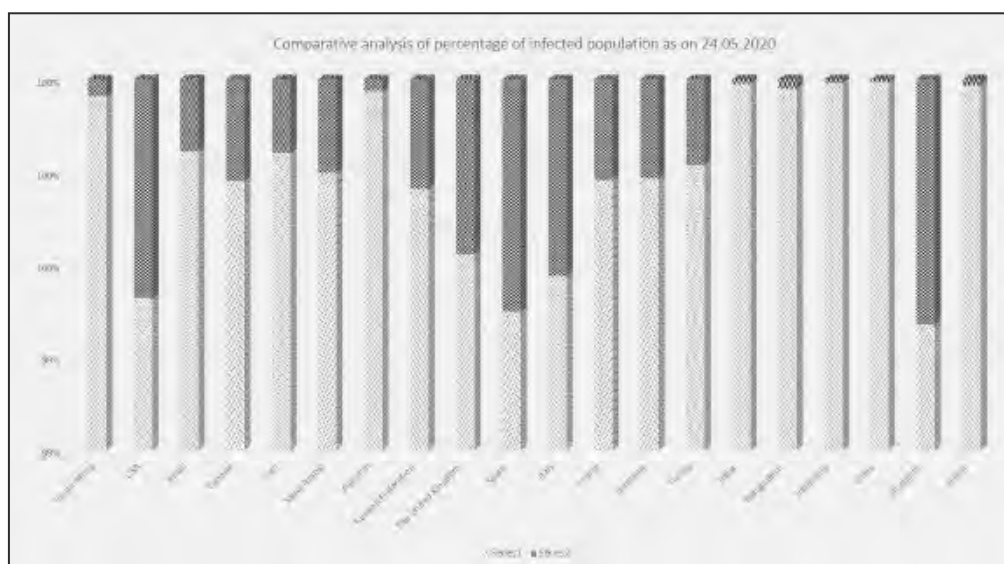
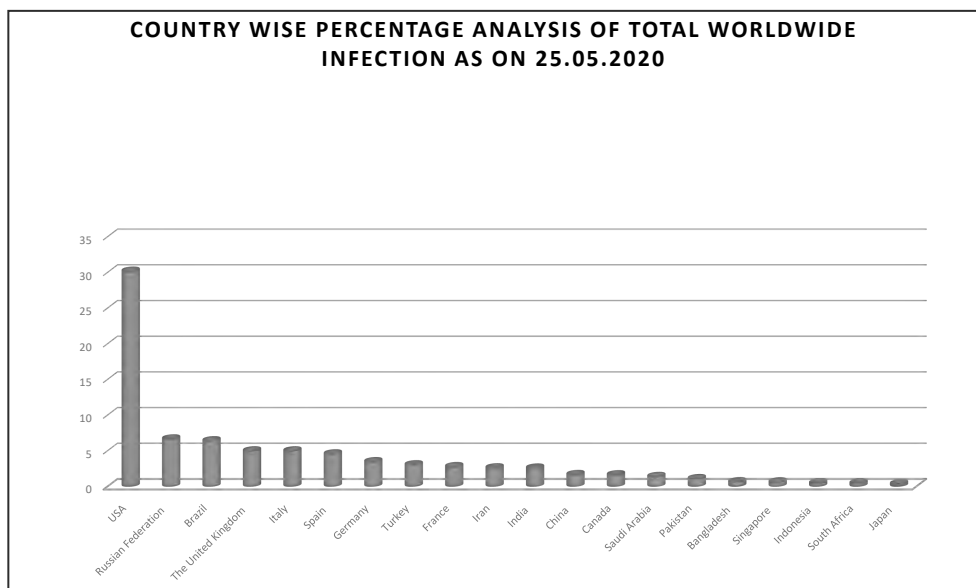


Figure 5: Comparative analysts of percentage of infected population as as on 24.05.2020. Infected population number was taken from WHO website and total Population' was taken from data based on the latest United Nations Population Division estimates (<https://www.who.int>)

6A



6B

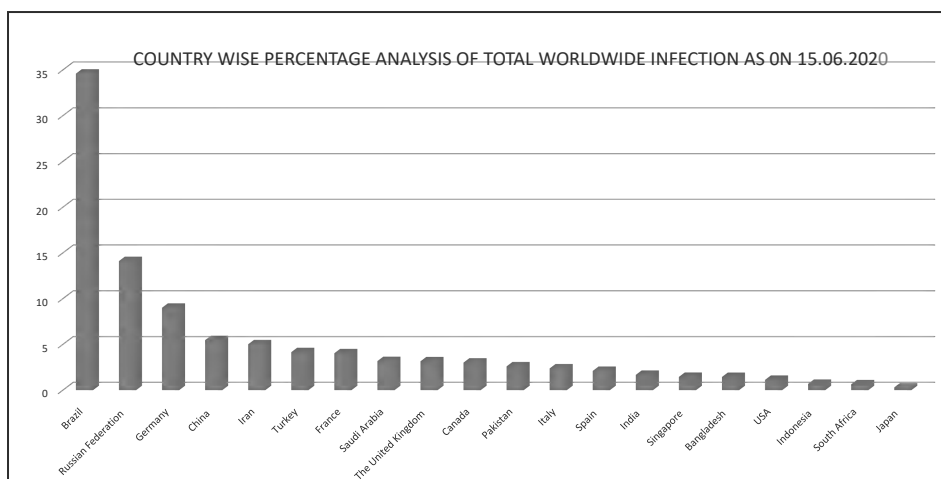


Figure 6A & B: Graphical representation of country wise percentage of total infection. Number of Infections (Table 1 as on (A) 24.05.2020 was divided by the total infected population worldwide (5204508) (B) 15.06.2020 was divided by the total infected population worldwide (5876587)) as they appear in the WHO website (<https://www.who.int>). Percentage was calculated accordingly using MS Excel tools.

The mortality rate (Fig 7) was quite low in most south Asian countries like Singapore, India, USA, Russia, while most European countries like France, Italy and Spain showed high rate of mortality. These

differential effects of SarsCov2 infection in different geographical and demographical zones of the world can be attributed to complex interdependent factors that have been discussed later.

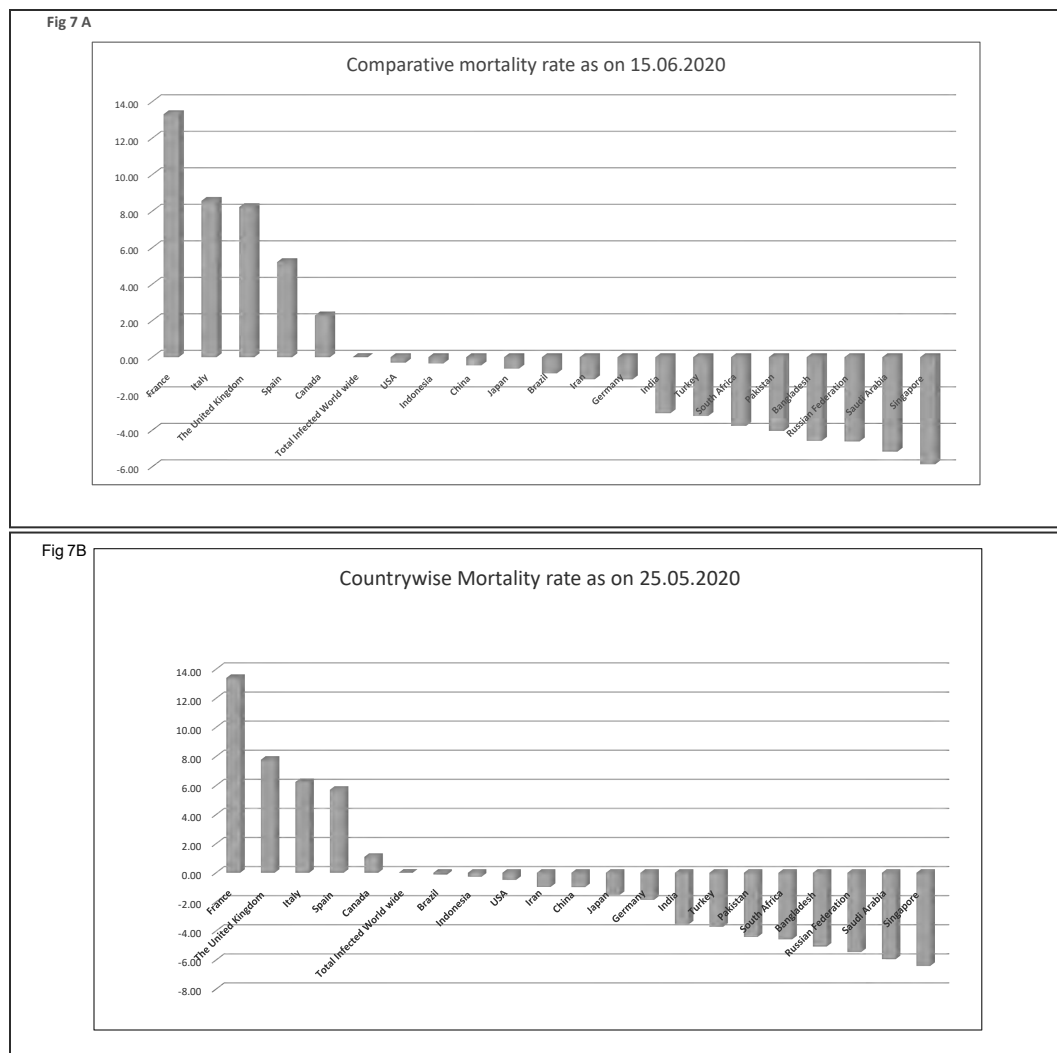


Figure 7 A & B. Graphical representation of mortality' rate at background of world mortality rate. Percentage of total number of deceased to total infected was calculated country wise and the difference with that of the total infected worldwide was done. Comparath'e data as on (A) 25.05.2020 (B) 15.06.2020 tvbj obtained from WHO website (Situation Report; <https://www.who.int/>, Percentage was calculated accordingly using MS Excel tools

The series of events and preliminary analysis not only prove the enigmatic nature of the virus but also make us believe that we are still in an early stage of a long battle. Hence, it is very important to calibrate our response and not worry much about winning or losing the battle in weeks. Leading scientists and virologists in the field feel that this pandemic is here to stay till middle

of next year hence the plan should be to look forward to understanding how to minimize the loss of life and economy. The infection is spreading rapidly with each passing day in India and, with its dynamics and population overload, India needs to have a very well-planned strategy to minimize the loss. Studies are still in a brooding stage and gaining knowledge about the infectivity of

the virus at different stages of infection is of utmost importance now in order to be able to curtail the rapid velocity of the curve. The reports regarding the nature of the virus known to us so far is also still not very clear.

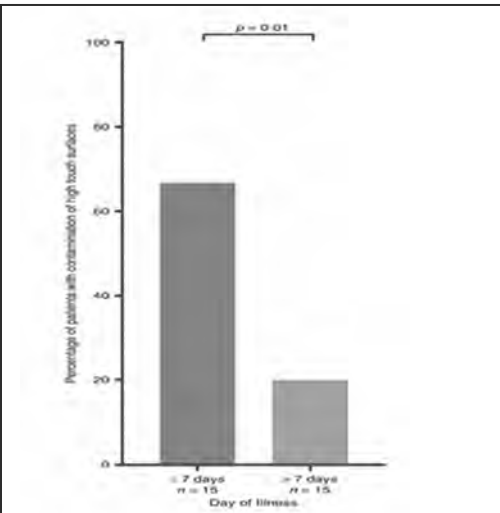


Figure 8 A: Percentage of contaminated swabs from surface samples, 'in rooms with any' contamination.

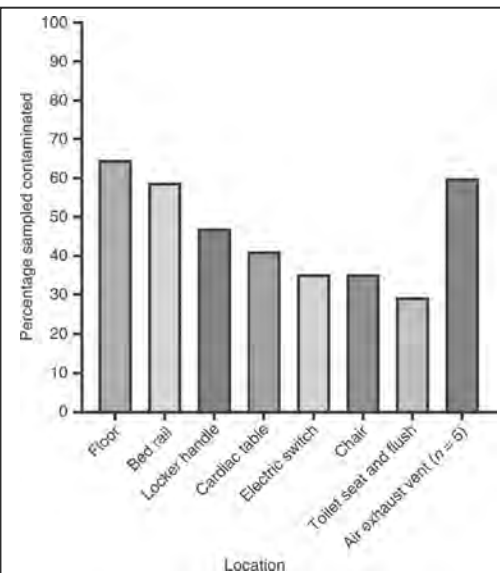


Figure 8 B: Percentage of patients with contamination of high-touch surfaces in the first week of illness compared with more than first week of illness, n = 15 in both the groups.

Although extensive surface contamination with SARS-CoV-2 by a symptomatic patient has been demonstrated (Fig 8A) (Chia et. al., 2020; Ong et. al., 2020), little is known about risk of airborne transmission of SARS-CoV-2 and whether asymptomatic individuals pose the same environmental contamination risk as symptomatic ones. Viral shedding has been demonstrated to continue even after clinical recovery of COVID-19 patients (Young et. al., 2020) and there are multiple reports of asymptomatic patients testing positive for SARS-CoV-2 (Chan et. al., 2020; Pan et. al., 2020, Bai et. al., 2020). In a subgroup analysis, the presence and extent of high-touch surface contamination were significantly higher in rooms of patients in their first week of illness (Fig. 8B) (Chia et. al., 2020) Significant environmental contamination by patients with SARS-CoV-2 through respiratory droplets and faecal shedding suggests the environment as a potential medium of transmission and supports the need for strict adherence to environmental and hand hygiene. Larger individual patient-level studies examining the droplet and aerosolizing potential of SARS-CoV-2 over different distances and under different patient and environmental conditions are rapidly needed to determine the generalizability of the current knowledge.

Till date different strategies have been utilized for treatment of Covid-19 and a number of therapies that are under investigation include drugs which have been used to treat malaria and autoimmune diseases, antiviral drugs that were developed for other viruses, and antibodies from people who have recovered from COVID-19. Most people who recover from COVID-19 develop antibodies against SARS-CoV-2. Antibodies are found in plasma, the yellow liquid portion of blood. Studies are underway to evaluate use of convalescent plasma as treatment for patients with

severe COVID-19 and to prevent infection (prophylaxis) in certain high-risk patients exposed to COVID-19. Convalescent plasma might provide immunity by giving patients neutralizing antibodies for SARS-CoV-2. Although there is a lot that is unknown, convalescent plasma may work best for patients earlier in the disease course (Anurag et. al., 2020). In spite of the fact that the entire world is focussed on developing treatments for this enigmatic particle none has been very successful so far. Why is it

so difficult to develop treatments for viral illnesses? It is because firstly an antiviral drug must be able to target the specific part of a virus's life cycle that is necessary for its replication. Secondly, it must be able to kill a virus without killing the host cell. Finally and most importantly it has high mutation capability, potentially developing resistance to whatever drugs or vaccines we develop. The list of vaccines that are in the developmental process presently is given below (Table 2).

Table 2: List of few probable Vaccines against Covid-19 disease {Andrii and Irina 2020}

Candidate	Status/clinical trials	Sponsor/Producer
Coronavirus vaccine (self-replicating RNA)	Preclinical development	Arcturus Therapeutics
BNT-162 mRNA vaccine	Preclinical development	BioNTech in collaboration with Pfizer
Recombinant Coronavirus vaccine	Phase II Clinical Trials	CanSino Biologics Inc.
Protein-based vaccine (S-Trimer)	Preclinical development	Clover Biopharmaceuticals
mRNA based coronavirus vaccine	Preclinical development	Curevac
anti-SARS antibodies	Preclinical development	Distributed Bio
Vaccine adjuvant CpG 1018(adjuvant to S-Trimer vaccine)	Preclinical development	Dynavax Technologies Corp
anti-SARS antibodies	Preclinical development	Emergent BioSolutions
Coronavirus vaccine	Preclinical development	Geovax
Vaccine adjuvant(adjuvant to S-Trimer vaccine)	Preclinical development	GlaxoSmithKline
Self-assembling vaccine (SAV)	Preclinical development	HaloVax (Hoth Therapeutics + Voltron Therapeutics)
Coronavirus vaccine	Preclinical development	Heat Biologics Inc.
INO-4800	Phase I Clinical Trials	Inovio Pharmaceuticals
DNA-based vaccine		
Coronavirus vaccine	Preclinical development	Johnson & Johnson
mRNA-1273	Phase I Clinical Trials	NIAID in collaboration with Moderna Therapeutics
NVX-CoV2373	Preclinical development	Novavax Inc

Candidate	Status/clinical trials	Sponsor/Producer
Coronavirus vaccine		
mRNA vaccine	Preclinical development	Translate Bio Inc in collaboration with Sanofi Pasteur
Oral recombinant vaccine	Preclinical development	Vaxart Inc.
VIR-7831, VIR-7832 anti-SARS antibodies	Preclinical development	Vir Biotechnology in collaboration with GSK
anti-SARS monoclonal antibodies	Preclinical development	Vir Biotechnology partnerships with Biogen, WuXi Biologics
siRNA	Preclinical development	Alnylam and Vir Biotechnology
Tuberculosis vaccine - BCG	Phase III Clinical Trials in 6 countries	

While the entire human race waits for a wonder candidate, the only steps that common man can take are to stay healthy and hope to combat the microorganism if contracted. The questions are therefore straightforward: what have we learned over the past five months and how might that knowledge put an end to this pandemic? Unfortunately, we do not have an answer to these questions. The enigmatic nature of the virus has compelled common man to label scientists all over the world as politicians, whose words cannot be relied upon. We must agree on one issue that the inability to characterize the virus does not lie in the inefficiency of the thousands of laboratories trying to find an answer but in the weird nature of the virus.

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Dystopian Musings, Hyperstition and the Twisted Narratives of a Global Pandemic

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This not-so-academic essay comes with a piece of advice, a sort of deceptive *caveat lector* from Bugs Bunny, the popular American cartoon character. For those who do not know: Bugs is a talking rabbit. Barely weeks into the Corona virus pandemic as the world was slammed shut indoors, social media networks, and the deep net were rife with memes, vines and templates spawned by quick wits that worked overtime to drive us crazy as well as regale us with their unrelenting and at times mildly twisted sense of humour. Among the fairly innocuous memes was one with Bugs Bunny where he is shown to be stretching out on a grassy knoll with a half-eaten orange carrot in his hand and smugly declaring: “Why take life so seriously? Nobody got out of it alive!”

This gallows humour struck a chord. By the end of March 2020, it seemed political leaders across the world, especially the right-wing ones, were becoming too much like Bugs as a ruse to mask their nefarious intentions or they had really no clue about what they were after (although the latter seemed highly unlikely). Many of them acting as preposterous exhibitionists who as George Monbiot, the *Guardian* columnist described in an article, were turning into something worse, like killer clowns from outer space — right out of some Hollywood

B movie. Apparently, I was more interested in figuring out in the overkill of information and discourses, from rambling philosophical essays to self-indulgent speculations, to the cryptic utterances of cyber-prophets and neo-anarchists, strange patterns of our collective habit to interpret contemporary events as the predictable outcome of a world gone wrong long time back. There is this peculiar cluster of traits and an air of foreboding that cut across discourses bringing disparate and conflicting voices into an uncanny correspondence with each other.

The COVID-19 pandemic was seen as the latest and by far the severest crisis in a world well ahead on its way in turning into something altogether unfamiliar which both the extreme left and the extreme right seem eager to make most of in their own ways. The left and the right come together by weaving narratives that are twisted in so far as they identify certain shared patterns of discontent in the reigning system of governance and state. In the early stages of the pandemic, both in Europe, America and in Asia, the ultra-nationalist, conservative parties tried to weaponize the health crisis by ‘stoking fears of immigration’, and even claiming that the lockdown was largely a policy failure on part of the government. But while America under Donald Trump

did miserably in its management of the crisis, the governments with clear socialist or communist alignment did far better in controlling it by tending to the needs of the people. The state of Kerala in India being one of the unique examples.

Interestingly, while the critique of the right-wing parties across the globe seemed to be confined to the immigration policies and failure of democratic states, the traditionally grounded left was keen to look into the crisis as a symptom of failed neoliberal policies and the contradictions of capitalism. In the journal of his quarantine days entitled 'Chronicles of the Psycho-deflation', the Italian media-theorist and Marxist philosopher Franco 'Bifo' Berardi quotes Srećko Horvat, the Croatian political activist who argues:

This is the political danger of coronavirus[sic]: a global health crisis that suits both the ethno-nationalist goal of forfeited borders and racial exclusivity, and the aims of ending the free movement of peoples (especially those from developing nations) but ensuring that the flow of goods and capital remains unchecked. At present, the rising pandemic of fear is more dangerous than the virus itself. The apocalyptic imagery in the media hides the deepening relationship between the far-right and the capitalist economy. And in the same way that a virus needs a living cell to replicate, so will capitalism adopt to the new biopolitics of the 21st century. Coronavirus has already impacted on the global economy, but it won't stop the never-ending circulation and accumulation of capital. If anything, we might soon be facing a darker, and even more dangerous form of capitalism, one

that relies on the stronger central [sic] and purification of populations. (*New Statesman*, February 19th, 2020).

In his 2019 book *Poetry from the Future: Why a Global Liberation Movement is our Civilization's Last Chance*, Horvat prophetically argued in a tone of mourning that, "Today, we are living in a long winter of melancholy, not only in Europe, but across the world." (8.66 in 'reference mode' in ePub format of the book) It is time where: "The past is forgotten, and the future is without hope. Dystopia has become a reality." (8.67) It may be noted that dictionaries, especially the Cambridge dictionary define dystopia as depicting "very bad or unfair societies in which there is a lot of suffering and injustice, after something terrible has happened" — typically one that is totalitarian or post-apocalyptic.

However, there is nothing extraordinary in this assertion of dystopia, nor could it be taken merely as a sign of resignation in the face of imminent danger. As I intend to argue in this essay that dystopia is a reigning symptom not only in someone like Horvat — to whom I would be returning several times in the course of the essay — or other radical Left activists or thinkers from Chomsky to Naomi Klein but occurs in the work of dark right-wing elements as well; in fact, it may be said that the entire centre-to-left or centre-to-right alignment and everything in between are under its spell. This is what I would call the 'banality of dystopia' in the way dystopian tropes and musings are regularly invoked to interpret or encapsulate a state of normalcy, or rather as an effect of the 'new normal' which could be dubbed as the way the world seem to be operating under the present circumstances. Many philosophers and political theorists understand the crisis of the present as inescapable fallout of the contradictions of

the system and the failure of the neoliberal policies of governance and trade. Many are willing to use this juncture to rethink the structure of the nation-state and the body politic and reimagine the kind of world we want to live in the future. The novel corona virus is seen as a not so novel symptom of “that plague most epic called progress” and where other symptoms include “climate change, global terrorism, forever wars, and naturally, the loss of liberty.”

The Banality of Dystopia: Nick Land and Accelerationists

In contrast to these ever-accelerating catastrophes, today's politics is beset by an inability to generate the new ideas and modes of organization [sic] necessary to transform our societies to confront and resolve the coming annihilations. While crisis gathers force and speed, politics withers and retreats. In this paralysis of the political imaginary, the future has been cancelled.

--*The Accelerationists Manifesto* by
Alex Williams and Nick Srnicek

In between the Left and the Right, are strange, rather indeterminate formations which partake of tendencies on both sides of the spectrum and seem to be at the heart of what I am trying to argue here (in a way, this is evident from the quote above which seem to be a not-so-distant echo of what Horvat uttered in his book that was brought out almost six years of the former). These formations contain rather fluid, strangely contradictory kind of competing groups—embracing Alt-Right factions to more rabid, nameless anarchists and nutty, self-styled cypherpunks—among which are the Accelerationists who grew into prominence in the last decade or so, mainly in Britain and the USA.

To point, the Accelerationists are a mixed

bag containing both Leftist and Right-wing factions. The term itself was coined by the academic Benjamin Noys from a dystopian novel by Robert Zelazny. As Noys defines it, accelerationism “describes certain libertarian post-Marxist positions (Deleuze and Guattari’s *Anti-Oedipus*, Lyotard’s *Libidinal Economy*, and the Baudrillard of the mid-1970s).” (Quoted in the Andy Beckett article in *Guardian* mentioned in Works Cited) Often dubbed as a form of political heresy which espouse that the only radical political response to capitalism is not to protest or disrupt its workings or “to merely await its demise at the hands of its own contradictions, but to accelerate its uprooting, alienating, decoding, abstractive tendencies” (Beckett). While there are certain crucial differences between the left and rightist versions of it, there are points around which they converge. Both of them believe that modernity and capitalism are ultimately incompatible. As one of their group, Pete Wolfendale points out that as “the left actively supports the project of modernity against capitalism, the right passively supports capitalism’s inevitable victory over modernity. The right thinks that the accelerative emancipatory force is nothing other than capitalism itself, whereas the left thinks that capitalism is an adaptive and plastic obstacle suppressing a deeper emancipatory dynamic. It is in essence a disagreement about freedom.”

Interestingly, most of the group comprise of young or not-so-young academics who have been active enough to put out pamphlets to books, documentaries and even webinars to explain their ideas for more than a decade, routinely denounced as they were for a variety of reasons not least of which is an inconsistent and perhaps superficial reading of Karl Marx. As two of the most engaging mouthpieces of this trend, Alex Williams and Nick Srnicek

begin their Accelerationists Manifesto by imagining a dark dystopian twenty-first century. It is a time, where, the “coming apocalypses ridicule the norms and organizational structures of the politics which were forged in the birth of the nation-state, the rise of capitalism, and a twentieth century of unprecedented wars.” They are quick to argue that in this bleak scenario, “the most significant is the breakdown of the planetary climactic system. [Which, in time would] threaten the continued existence of the present global human population.” Along with it, they name a host of other problems which are catapulting humanity into a perpetual dystopia; “terminal resource depletion, especially in water and energy reserves, offers the prospect of mass starvation, collapsing economic paradigms, and new hot and cold wars.” On top of that “continued financial crisis has led governments to embrace the paralyzing death spiral policies of austerity, [...] mass unemployment and stagnating wages.” Blaming the continued and ever-increasing complicity of the right-wing governments with forces of neoliberalization they do not fail to point out that the rise of the right is a result of the “continued paralysis and ineffectual nature of much what remains of the left.” Now, what is baffling is they argue that the way out of the impasse is to set free the “forces of creative destruction, setting free ever-accelerating technological and social innovations” that lie dormant in the process of neoliberal structures.

It was later recognized by the likes of Pete Wolfendale that nothing was ever put to rest or killed by its own systemic contradictions. Moreover, it was never directly addressed by them as to how a carbon-based economy could successfully resolve the problems of increasing energy depletion and ecological crisis. Among many other things, the Accelerationists claim their indebtedness

to the British philosopher Nick Land. As it was, he who “captured this [the heart of the matter, that is] most acutely, with a myopic yet hypnotizing belief that capitalist speed alone could generate a global transition towards unparalleled technological singularity. In this visioning of capital, the human can eventually be discarded as mere drag to an abstract planetary intelligence rapidly constructing itself from the bricolaged fragments of former civilizations.” (Wolfendale, Pete)

However, a few words are in order for the evasive figure of Nick Land. Before gaining a certain notoriety and cult following as the father of Accelerationism, Land for a long time was a largely forgotten figure in mainstream academia (which held very little promise in his regard), especially after he left his teaching post in the department of philosophy at the University of Warwick in the 90s. There with his feminist colleague Sadie Plant, he formed the later-much-talked-about Centre for Cybernetic Research (CCRU) which was the first of its kind in Britain to study a wide range of phenomena related to the increasing emergence of a technocratic culture. Nick went on to become a renegade figure whose short cryptic pieces could be read as dense, rather feverish cross-pollination of things as discrepant as systems theory, occultism, cyberpunk, the weird tales of H. P. Lovecraft, Nietzsche, Jean Baudrillard, the rhizomes of Deleuze and Guattari, underground rave culture and black metal music, besides many other things. Along with Curtis Yarvin, an American computer programmer and blogger, who goes by the name of Mencius Moldbug, he further developed a loosely cobbled syncretic doctrine that is fervently anti-democratic, and anti-egalitarian. For them, the liberal progressive history of the West toward ever greater possibility of justice

and equity is largely a hoax, a form of what they call “Whig historiography”; and as a fitting travesty of the positivist discourses of Enlightenment, Land named their tendentious philosophy ‘The Dark Enlightenment’. And it is here that the Left started to see him as a scabrous embarrassment no longer relevant to them.

In the insightful essay ‘Escape Velocity’ which, among other things is a critique of the neo-reactionary excesses of Land, Alex Williams argues that the “key to Land’s thinking was an idea he drew from Deleuze and Guattari’s *Capitalism and Schizophrenia* project: capitalism differs from prior social formations in that it operates through processes of deterritorialization, which work to liberate inhibited dynamics of creativity, previously carefully imprisoned in primitive or despotic taboos. Land hijacked this schematization, bringing out an implicit inhuman pro-capitalism.” In a certain sense Land wanted to see the forces of capitalism working their way out towards ultimate completion that would go way beyond the long-held Kantian pale of the ‘ethico-transcendental doublet’ to embrace the inhuman or what many would call the post-human. Therein lay his ‘madness’, his unrelenting courting of dystopia as a natural scheme of things to come. A highly mutative viral strain is always present in his heterogeneous concept-wielding leading to collapsing of familiar structures and methods in its wake; a perverse thriving in the relentless epidemic of materiality and conditions that would uproot the spirit of conservatism and stasis.

Epidemic, here, is an effect of things hurtling outward onto the abyss of the unknown. This, however, is not entirely a matter of anti-vitalist nihilism of sorts. It is indebted to Nietzsche. In the introduction to the only published anthology of his collected texts entitled *Fanged Noumena*, the

authors Mackay, Brassier and Beirut justly argued that one of the fundamental lessons from Nietzsche learnt by Land is that it is the “disturbing and enigmatic character of the world alone that impels towards the unknown; but an unknown that is no longer a hiatus or lacuna within the concept, since it indexes the un-idealistic extremity of matter construed as real difference.” (5.19 in the epub format of the book) Thus ‘matter’ for Land “is no longer the name of a recognizable substance, but a cypher for the unknown.” (5.20 in the epub format of the book). It is a Dionysian materialism of sorts that abandons the instrumental reasoning of what Derrida would call the ‘logic of non-contradiction’ to create more trouble, to disrupt, disturb, provoke or intensify.

Whither Hyperstition? Of Capital, Class and Containment

The self-consuming hubris at the heart of Land’s thinking might be symptom of a larger not-so-unfamiliar malaise of contemporary Western right-wing extremism from which the Left, with good reason, has tried to distance itself, busy as some of the Left-Accelerationists are to reimagine the mechanisms of governance and finance in old-fashioned ways. Indeed, Land’s dystopian musings of post-human order seems to fit, albeit uneasy, into the present scheme of things given the extremes of class violence and dehumanization that can be seen in the times of this pandemic when things have come to a halt. There is, in his thinking, an inherent disregard for ecology and large-scale destruction of nature, both of which, as categories are considered subservient to the impersonal machinations of a neo-capitalist world order that has normalized greed and exploitation to the generation of maximum profit. Indeed, the corona virus pandemic is perhaps only a culmination of a series of

breaks in the uninterrupted spur of a long cycle of capitalist growth; it is a hiatus that like none other before has unmasked the levels of inequality and asymmetry in terms of social justice and resources available to nations both rich and poor.

The looming threat of viral annihilation is only a long-drawn trigger effect of an accelerated production system that is increasingly intervening in the ecosystem. In a world like this, there is nothing 'natural' about the way the new viruses emerge and then migrate from one part of the world to the other at lightning speed. Dennis Carroll, as head of the Global Virome Project, suggested that when it comes to these kinds of viruses, "whatever future threats we're going to face already exist; they are currently circulating in wildlife" (Ieven and Overwijk). In an article on the political ecology of the COVID-19 crisis, authors Bram Ieven and Jan Overwijk argue that in recent years there has been a surge of demand for wildlife on the food market scene. They argue that "with this marketization of wildlife, we are getting in closer contact with millennia-old ecosystems that were previously closed off from interaction with humans."

This point was originally further developed by epidemiologist Rob Wallace who in his book *Big Farms Make Big Flu* clearly makes a case against the complicity between big corporate capital and government policy-making. According to him, "the real danger of each new outbreak of virus is the failure or the expedient refusal to grasp that each new [sic] COVID-19 is no isolated incident. The increased occurrence of viruses is closely linked to food production and the profitability of multinational corporations." He clearly drives home the point that "anyone who aims to understand why viruses are becoming more dangerous must investigate the industrial model of

agriculture and more specifically, livestock production."

Underpinning the unwillingness of governments and policy making in general to get into these issues, he further clarifies that capital is "spearheading land grabs into the last of primary forest and smallholder-held farmland worldwide. These investments drive the deforestation and development leading to disease emergence." From his experience and field work he has gathered that the "functional diversity and complexity these new huge tracts of land represent are being streamlined in such a way that previously boxed-in pathogens are spilling over into local livestock and human communities. In short, capital centers, places such as London, New York, and Hong Kong, should be considered primary disease hotspots." The particular pattern in which these pathogens have been travelling out of remotest hinterlands "into peri-urban loops, regional capitals and ultimately onto the global travel network" is something that may remind many of us of the 2011 Hollywood feature film *Contagion* directed by Steven Soderbergh. The film resurfaced in global public consciousness less than a month of the spread of the pandemic as many found the film's prescient mix of medical thriller and dystopia clearly relatable. With gripping epidemiological verisimilitude, the film charts the course of a fictional virus named MEV-1 from a Chinese wet market and its unprecedented spread through the circuits of global travel network to the rest of the world. As millions around the world get infected, the Centres for Disease Control and Prevention in Atlanta, Georgia and the World Health Organization in Geneva, Switzerland put in place a series of restrictive strategies from quarantine protocols to social distancing measures. It is understandable why this narrative find an uncanny resonance among

audiences during the period of extended global lockdown in 2020.

This turn of events surprisingly might be taken as an opportunity to reconsider what has sometimes been seen as the most enduring insight of Nick Land: his concept-metaphor ‘hyperstition’ — formed by joining the two words ‘hyper’ and ‘superstition’. Like all productive neologisms, it works as a portal to intervene into previously unheeded connections. It can be considered as a way of understanding how the logic of capitalism has perpetuated itself in recreating or translating its cultural or fictional narratives — which in many cases might be dubbed as narratives of anxiety — into reality. The word has been described as a ‘positive feedback circuit including culture as a component’ which by their very existence as ideas, function causally to bring about their own reality. Nick Land in a written correspondence explains that “capitalism incarnates hyperstitional dynamics at an unprecedented and unsurpassable level of intensity, turning mundane economic ‘speculations’ into an effective world-historical force” (Carstens). Anxieties about the future in a way are the symptoms of a world in the grip of ‘future shock’. Which, by the way, is one mechanism by which hyperstition works to bring about the causal conditions for apocalypse. As Land explains that once started, a hyperstition spreads like a virus and with unpredictable effects. They are like “Chinese puzzle boxes, opening to unfold to reveal numerous ‘sorcerous’ interventions in the world of history.” (Quoted in Carstens piece mentioned in Works Cited).

What Land is arguing may find its distant echo in what others like Oscar Wilde to Jacques Lacan had remarked on the nature of fiction and truth; while the former thought of reality imitating art, the latter claimed that ‘truth has the structure of fiction’.

Nowadays we almost habitually realize that reality and fiction are increasingly spliced up in ways that make our usual versions of the binaries seem like a smashed labyrinth of mirrors breeding confusion and chaos at every turn where it is difficult to tell one apart from the other. The gap between dystopia and reality are turning indistinct or closing in on us in unexpected ways. As William Gibson, the father of cyberpunk famously said that ‘the future is already here, it’s just not very evenly distributed’. In interviews since the times of the pandemic, the director Steven Soderbergh has said that while he was pretty unsurprised by the way the pandemic had turned out, he was taken aback by the immense irrationality and indiscretion in the behavior of humans around the world in general.

This apparent irrationality in the garb of violence and exploitation could also be seen in different parts of the world. From political commentators to sociologists around the world have argued with damning proof and concerns that the extended period of the global lockdown was exploited by governments around the world to push reforms that were not in the best interests of the poor or disenfranchised. It has helped lay bare some of the most brutal class divisions in society and the profiteering of the new form of corporate capitalism of the digital age. The lockdown period has created the opportunity for rethinking and refashioning some of our long-held concerns and habits about the nature of human labour and privacy in ways whose contours are beginning to appear even as I write this piece. Business tycoons and policy-makers are either competing or in cahoots to imagine new forms of civic containment and work places. It can be called a new imagined community of connected minds and distant bodies raised on the ruins of a largely ravaged civic society.

It has been claimed that the virus has not destroyed society, rather a destroyed society has been confronted by a cruel virus (Prashad). While the middle and the affluent classes who were privileged enough to afford self-isolation were comfortably cocooned in their homes trying out the latest fitness regime and nitpicking on the protocols of no-contact delivery for ordering food and other essentials online, thousands died on the road or in transit after mass layoffs. According to the International Labour Organization, 1.25 billion people were out of work by the beginning of April 2020. To make things worse 2.7 billion people or 81 percent of the global workforce were affected by “full or partial workplace closures” (ILO 2020). Firms and other big businesses were fast to use the space to reshape how goods are produced, transported and sold.

In India, the sudden visibility of an epic working force who till the outbreak of the pandemic were largely forgotten by everyone—that by twisting the words of Slavoj Žižek—is one of the few things we really hated about the coronavirus outbreak. The very fact that they had four hours in hand to evacuate out of their work places, has given us the opportunity to ponder upon the ‘shock tactics’ of governance and its connection with corporate capitalism. India was caught in the spiral wave of what Naomi Klein famously phrased as ‘disaster capitalism’. Millions of people were subjected to massive class violence by being driven out of cities to make its spaces safer for the urban elite and the more affluent classes, something that might be seen as one of the tragically cruel instances of cross-contagion containment. Their exodus across the length and breadth of India’s vast rural areas to reach their homes, is one reminder of the increasingly changing correlations between capital and

class and labour value in a society that privileges the technocratic labour of big corporations over the menial labour of nameless multitudes. And yet, now more than ever, our everyday lives are dependent on the relentless hard work of the urban precariats like the online delivery boys, to sanitation workers to store attendants and private medical health workers and underpaid technicians and chemists who had to brave daily hazards and inequities to keep the essential urban services intact. They are united in their suffering with the nameless and faceless migrant labourers all over India.

Rural India Online, as part of the *People’s Archive of Rural India* (PARI), is a network of reporters and photojournalists who had reported on the precarious conditions of this exodus with rare faithfulness. Its founder, the distinguished journalist P. Sainath reported that “health expenditures across India today are possibly the fastest growing component of rural family debt” (Halliman). A study by the Public Health Foundations of India found that in 2011-12 some 55 million people had been impoverished by health costs, 38 million by the cost of medicine alone” (Halliman). In an interview with *The Guardian* entitled “Will Coronavirus lead to fairer societies?” the economist Thomas Piketty explained that at the very least, the crisis will “reinforce the legitimacy of public investment in healthcare. But it could also have a completely different kind of impact.” Since historically, he explained pandemics have triggered xenophobia and nations turning inward. In another interview to *The Economic Times* (May 12, 2020) echoing other fellow economists like Abhijit Vinayak Banerjee and Raghuram Rajan on the need for a basic income scheme for the poor during the lockdown period, he explained that in

case of India, before the pandemic, “the trend toward sectarian conflict reflected the lack of political ambition to change the economic system and to put in place a system that is truly based on economic justice.” He went on to justify by saying that this will be even truer after the pandemic as “we need to think again about how to reconcile prosperity and equality” since the main determinants of inequality are not “economic and technological; they are ideological and political”.

With the impoverishment of the more traditional working classes worldwide came a new wave of profit, consolidation and strengthening for the global corporate elite who as part of what many call ‘platform capitalists’ are providing a whole network of services and products based on digital technology. On April 2020 in a report in *The New Republic* it was claimed that Jeff Bezos the founder of Amazon has seen his net worth increase by 20 billion dollars during the initial months after the pandemic. Since during the months of lockdown, the stranded affluent populace became increasingly dependent on a vast array of services from providing basic foodstuff to the indulgence of online streaming videos. Thus, the governments around the world are either collaborating with or capitulating to the technological industrial complex of Silicon Valley giants who are harnessing data in the times of the pandemic to create even more elaborate schemes of containment. This is a further tweak in a post-surveillance society after the September 9/11 attacks when users around the world became much more tolerant and open towards sharing of personal data through the networks of third-party service providers. The coronavirus crisis for the global elite is only a sequence in an unfolding drama of catastrophe for which they were preparing for a long time.

High-Tech Dystopia to Post-Pandemic Libertopia and Beyond

In his book *Poetry from the Future*, Srećko Horvat writes about what he calls the culture of ‘fetishistic apocalypticism’ worldwide by which he means the increasing culture of global acceptance that not only an imminent disaster is afoot but that there is nothing that can be much done about it as far as saving the underprivileged multitudes are concerned. In any major crisis since the main impetus is to save the super-rich at the cost of the impoverished classes because the former are seen as custodians of civilization. But ironically it is the global custodians who have catalyzed or accelerated the path to crisis. And even a crisis, for them is always a good opportunity to make even more profit.

At the 2015 World Economic Forum in Davos, Eric Schmidt, the then CEO of Google proposed that over time “the internet will disappear...you won’t even sense it, it will be part of your presence all the time.” Here, like a leading futurologist, Schmidt was gingerly unveiling the plans to create a new global normal where information technology would be seamlessly integrated into our lives to make it virtually undetectable, something on the lines of the novel *The Circle* by the American author Dave Eggers. As Horvat argues that this is a plan for an absolute colonization of the world and its people by what futurologists in the Silicon Valley “call the ‘internet of things’ (a phrase connoting the absolute integration of our homes, vehicles and infrastructure of our lives into one single network); smart cities (the privatization of our cities’ infrastructure by Silicon Valley); social networks (FB, Twitter, Instagram); Google; transport innovations (drones, Tesla Motors), Big Data, total surveillance, AI, VR’ and everything in between”. (11.28 in the epub format of the book). It reads

like the perfect hyperstitional dynamics of a high-tech dystopian narrative.

This is what has been dubbed as ‘machinic enslavement’ following Italian philosopher and sociologist Maurizio Lazzarato who also influenced the Marxist media theorist Franco Berardi in his development of the ideas of ‘cognitive capitalism’ (this in turn is influenced by Felix Guattari’s ideas about semio-capitalism which is a capitalism based on the production of signs). According to them the enslavement of a population happens by integrating them with a proliferating digital culture where any information shared over web is a transaction that would be efficiently stowed away to be part of an immense stacks of data which would be analyzed by sophisticated algorithms to help map the cognitive dynamics of discrete social or demographic profiles. This information would again be used by data mining firms to help track and predict the behavior of populations, be it in cases of voting, crime or major health crisis.

In her report on the news platform *The Intercept* entitled “Screen New Deal”, Naomi Klein puts forth in vivid details how the present corona virus crisis is high-tech than previous disasters. Under the guise of effective action against this crisis and exploiting the tidal wave of panic, government policy in USA in collusion with the big tech giants are pushing things into a hitherto unforeseen direction. It is something that would also have global repercussions since much of the big tech giants are in direct collaboration with nation-states all over the world for business expansion and policy-making and much else besides. That is the future we are being rushed into could transform our lives into a “living laboratory for a permanent—and highly profitable—no touch future.” It is a future of a highly connected digitally

invasive, data-intensive reality where a drastically reduced human work force would be working in tandem with AI and Big Data.

As she argues that “the trackable, traceable, accelerated future that claims to be run on “artificial intelligence” but is actually held together by tens of millions of anonymous workers tucked away in warehouses, data centres, content moderation mills, electronic sweatshops, lithium mines, industrial farms, meat-processing plants, and prisons, where they are left “unprotected from disease and hyperexploitation.” Thus “whatever concerns people usually had about the security, quality and inequity of online classrooms and telehealth, about location tracking and cash-free commerce obliterating our privacy and security are being swept away by the aggressively revamped policy “that these technologies are the only possible way to pandemic-proof our lives, the indispensable keys to keeping ourselves and our loved ones safe.”

However, as I want to argue, in case this vision of accelerated future fails and there is a mass uprising or resistance against the votaries of it, or rather even if it succeeds a bit too well, leading to expected depletion of resources or a disastrous climate change, the global elite have had plans ready for a long time to counter it. On 30th January 2017, the *New Yorker* published an article entitled ‘Doomsday prep for the super-rich’ where it clearly stated that as a class the oligarchy of the global super-rich are highly invested in sorting out solid survival colonies and homes with adequate resources in case of a natural calamity or civilizational collapse. Richard Hoffman, a co-founder of LinkedIn and a prominent investor, admitted to the magazine that among the wealthy, interest in buying property in islands or in places

like New Zealand is like a code for having a plan B in case of crisis.

Apart from the existential or biological hazards related to pandemic and climate change, another reason to flee for the mega-rich is the imposition of taxes and other fiscal measures, especially in times of crisis, to make them as owners of the companies more socially accountable in some democracies. Pandemics gives them the right excuse and opportunity to hunt for alternative means of survival and resources. In an article published in *Forbes* on April 13, 2020 entitled “The Superrich Are Increasingly Coming Under Attack During the Corona Crisis”, it was reported that the super-rich have resorted to extreme measures to ward off the corona virus crisis—including preparing for doomsday bunkers. It cites the example of the Survival Condo owner Larry Hall who bought an aborted silo in 2008 and converted it into a state-of-the-art residence that offers ‘virtual windows’, a gym, pool, movie theatres, shooting range and a five-year supply of food and water. Quoting VICE, the report stated that the mission is to protect residents from a whole wide range of threats from viral to bacterial to volcanic ash, meteors, solar flares and civil unrest.

However, this is rather modest compared to the grand projects afoot for a long time—that among other things might just be able to create a post-pandemic libertopia (a combination of ‘libertarianism and ‘utopia’), that is a high-tech arcadia of sorts which would act as a refuge for the super-rich to escape governments and tax-policies they don’t like. Almost as early as 2008, Peter Thiel, the Silicon Valley giant, influenced as he is by the principles of post-libertarian ‘Dark Enlightenment’ of Yarvin and Land, funded a mission to develop a floating chain of habitable eco-friendly city-states in the middle of the ocean,

called ‘Seastead’. Posed as a tax-free new age haven for the mega-rich, it is actually meant to serve as a “permanent, politically autonomous settlement in the event that the sea level rises due to global warming.” (O’Brian, Hettie)

An article published in the *CityLab* entitled “The Floating City, Long a Libertarian Dream, Faces Rough Seas” narrates how the original idea of seasteading was floated by the young libertarian, neo-anarchist Patri Friedman, who true to his legacy as the grand-son of the Nobel Prize winning neoliberal economist Milton Friedman, wanted to create a network of oceanic city states, and how it was successfully taken up by Peter Thiel. As one of the co-founders of PayPal and one of the Board of Directors in Facebook, Thiel is one of the most formidable venture capitalists cum supporter of Donald Trump. Recently he attracted a lot of public outrage for his highly secretive CIA backed Big Data mining firm Palantir Technologies to create Coronavirus data tracking systems in the USA. In the more privacy-compromised environ of the post 9/11 scenario, Palantir has been clearly involved in the tracking and deportation of immigrants in the name of internal security. The coronavirus pandemic has given individuals like him the opportunity to expand the agenda of a post-pandemic surveillance capitalism that thrives on ‘the shock doctrine’ of holding populations hostage to the waves of terror in order to turn them into compliant hordes. At the heart of this libertarian city-state is the philosophy of competitive governance. As the report clearly states that “instead of a traditional state/citizen relationship, seasteaders advance the idea that government is a product, with customers electing their preferred mode from a marketplace of providers.” It is like a futuristic state where citizens sign user

agreements with government providers, disputes are settled in arbitration courts, and insurance companies replace public law courts.

It is clearly indebted to the philosophy of Yarvin and Land both of whom are influenced by the traditional political ideal of 'Prussian cameralism', in which a state is conceptualized as a business that owns a country. It is a business that is regulated not via the will of its citizenry, since there will be no democracy—but by their ability to exit as consumers in a free market for states. Thus, architectures of exit are of paramount importance, since for Land, as it is quoted by Patri Friedman, "free exit is so important that it is the only Universal Human Right" imaginable. It has been pointed out that The Dark Enlightenment is at its core a eugenic philosophy of what Land has termed 'hyper-racism' (Burrows). The ability to 'exit' based on consensual agreement from competing city-states would lead to "racially based micro-states". Here "capitalist deterritorialization combines with on-going genetic separation between global elites and the rest of the population resulting in complex new forms of 'Human Bio-Diversity'" and ultimately leading us to towards the singularity and a post-human future.

According to a report in *The Guardian*, Peter Thiel credits the book *The Sovereign Individual: How to Survive and Thrive during the Collapse of the Welfare State* as one of the most influential books in his life that guided and framed his policies in what could be called a hyperstitious form of self-fulfilling prophecy. In the book originally published in 1997, the authors William Rees Mogg and James Dale Davidson predict that the ensuing revolution in the field of computer programming and cyberculture would ultimately lead to the erosion of the nation-state. The authors Rees Mogg and Davidson

argue the rise of 'globalized cybercommerce lubricated by cryptocurrency' would drastically limit the governments' powers to tax; "they further predict that the next millennium will see an enormous decline in the influence of politicians, lobbyists, labor unions and regulated professions as new information technologies democratize talent and innovation and decentralize the workplace. In their forecast, citizenship will become obsolete; new forms of sovereignty reminiscent of medieval merchant republics will spring up; electronic plebiscites will decide legislative proposals; mafias, renegade covert agencies and criminal gangs will exercise much more behind-the-scenes power." (Anonymous Review, *Publishers Weekly*) At the centre of the narrative there is speculation as to how a civilizational collapse would pave the way for the rise of the surviving "cognitive elite" who would then rebuild a new world after hiding for a time and waiting for the existing world order to fall apart.

As it becomes clear dystopian musings are not necessarily bad since it depends on the perspective of the partisan group involved. In this case the libertarian, anarcho-capitalist crypto-fascism of the global corporate elite. 'Orwellian nightmare' as a phrase is not necessarily undesirable for these parties. Their attitude proves clearly that dystopias more likely resemble utopias that have gone wrong or pave the way for further "utopias that function only for a particular segment of society." *The Guardian* reported that according to Zinc Network, a communications agency that tracks disinformation and propaganda, there has been a clear pivot among far-right groups in the U.K., U.S. and EU to "utilize the pandemic to bring new relevancy, attention and support for their key grievances." For these elements the modern liberal states are on the verge of collapse and their fall

can be accelerated though armed action or by a major crisis. According to a report by POLITICO, civil rights advocates have warned for months that the corona virus crisis “would aid in recruiting for the most extreme white-supremacist and neo-Nazi groups—those actively rooting for society’s collapse” (Scott and Overly).

In this world what is the future of the millions of impoverished, undernourished women and children? Has it been completely hijacked by the pandemic? Or these gross inequities fuel a fresh struggle for their rights? Or is it better to postpone it indefinitely as we ponder upon the virtues of welfare state? The debate continues to rage among the philosophers and economists for a renewed relevance of the more active role of governments in economy that would see public services as investments rather than liabilities and continued relevance of universal basic income and wealth taxes. Naomi Klein eloquently argued in her book *The Shock Doctrine* that the entire complex of disaster capitalism revolves around using calamities and disasters of any kind to push laws and policies profiting big businesses and big capital. Since unlike normal times the population of nation-states are distracted with their woes. In India, during the pandemic a series of the most atrocious labour reforms were rushed through along with opening up the economy to even more privatization in the hands of neoliberal ‘disaster capitalism’. This has seriously undermined the already shaky foundations of democracy. The same is happening in many other parts of the world from Hungary to South America.

Since the virus is literally and figuratively a mutation in the global politics of capitalism—the pandemic is at once the culmination of the systemic contradictions of capitalism and its biggest counter-narrative—it is important that we rethink

our fundamentals of engagement with politics and nature and understand their irrevocable interwovenness. As the legal scholar Mehrsa Baradaran has eloquently written that the pandemic has affirmed some of the core premises of the progressive movement: “that our actions affect other people even when we are not aware; that the imperative of economic growth can conflict with the general welfare of people, and that we are perfectly capable of rapidly rendering society to subordinate GDP growth to human needs” (Levitz). It is a world where the people need to invent their own praxis for what I would call the ‘red-pill of purged vision’. Dystopias have this capacity to make the world come together in a shared dream of the future.

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Food for Thought: The Changing Culinary Landscape in the Times of Corona Pandemic

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In a pandemic-stricken universe, the past year and the year that is have both been times of shock, adjustment, loss and resilience. The various manifestations of food as a social construct came to acquire a new-found potency in the wake of the Covid-19 pandemic situation, where millions of people were left in dire straits, suffering both pathologically from the pandemic and also socially from the attendant fear of 'Food Poverty'. The responsibility of having to provide for oneself and the family grew manifold when the stigma of having contracted the deadly virus led the infected person/(s) to a forced state of self-isolation and thereby prevented the concerned patient/(s) from frequenting markets and shops to procure basic amenities. With the breakdown of Food Supply and Distribution (FSD) chains all over the world under the conditions of strict lockdown and social distancing (which were introduced strategically to combat the spread of the deadly virus), a great premium was placed in the acquisition and preparation of food. Food not only represented a vital necessity for sustenance, but the conviviality of our shared human experience which was hitherto so well represented through the

communal acts of fasting and feasting was soon remodelled into becoming a twin-mode of resisting the toughest of times documented in recent social history as well as re-asserting the human zeal to beat all odds in its zest for life.

"The astonishing smell of rice in the night sky.
It seems that some still cook rice,
Still serve it, still eat it.

And we are awake, all night.
With the astonishing smell of rice,
In supplication, all night."¹

This translation by Professor Supriya Chaudhuri of Birendra Chattopadhyay's moving poem in Bengali, titled: 'Ascharja bhaater gandha,' written as a literary reflection and representation of the food riots of 1965, aptly brings out the divided ethos in a hunger-stricken world where the chasm between the haves and have-nots is rudely driven home through the wafting

1 This is a translation by Professor Supriya Chaudhuri (source: Facebook: 02.09.2020., Timeline of Supriya Chaudhuri) of Birendra Chattopadhyay's poem, 'Ascharja bhaater gandha' written in the context of food riots following the great Bengal famine of 1943.

smell of rice to those who can ill-afford it on their plates and must satisfy their empty stomachs with only the smell of food. And never before was the importance of food so acutely realised by one and all as with the onset of the Coronavirus pandemic and its concomitant anxieties around food. The outbreak of the Coronavirus pandemic in the Wuhan district of China in late 2019 sent down shock waves of fear and trepidation all over the world and the Indian subcontinent was also left grappling with the fear of trying to cope best with the ever-changing dynamics of a situation the world had never faced before.

Food has always been a major marker of social class, economic status, religious and ethnic backgrounds, gender identity and a veritable cultural capital for mankind since times immemorial. Societies have been formed, contested, disintegrated and rebuilt around man's claim to, consumption, and control of food and food systems. When the Novel Coronavirus affected people all over the world in 2020, millions lost employment, and by extension, food scarcity became an imminent reality. Global shortages of food, uncertainties regarding its procurement and distribution led to unscrupulous hoarding and widespread forms of exploitation with the lure of food. While in the first few months of the spread of the contagion there was already a rising anxiety over the consumption of meat (the association of certain animals as being possible carriers of Coronavirus has since been debunked as a myth), many feared that fast food too could be a possible source of transmission of the deadly Coronavirus. Food preferences were steadily being redefined to opt for fresh, organically sourced local produce and home-cooked, antibiotic residue-free, growth hormone-free, preservative-free meals. During the stringent periods of lockdown as announced by governmental

authorities, restaurants were shut down and eating-out was no longer an option. People turned in large numbers to hone their rudimentary culinary skills and returned to their roots in their search for healthy and nutritious home recipes. Till the time that vaccines seemed a distant dream and even afterwards, dietary choices were consciously made to accommodate more and more immunity boosting food items. And yet, there were scores of people – homeless, jobless migrants, undertaking long arduous journeys in search of their next meal and shelter, unsure of where they could find the safety of home and hearth. Irrespective of the different difficult situations people faced because of the pandemic, and cutting across the barriers of nationality, race, caste, sex and class, the pangs of hunger urged them all to continue their strife for life.

Grabbing the Grub: The Race for the Last Morsel

"The pandemic reinforces what we already know. We can't keep people healthy if they don't have a roof over their head and food on the table."

— Bechara Choucair, M.D., Kaiser Permanente's Senior Vice President and Chief Health Officer

As the number of the virus afflicted population kept steadily increasing and frightening the nation with the threat of the menacing contamination, borders and businesses witnessed immediate closure as part of lockdown restrictions and this had rapid and severe consequences on the food chain. The Food Supply and Distribution network was hard hit by the administrative decision of shutting down full-time operations in the service industry entirely and quarantining people within the home, and soon it was also mandated that non-

essential services would be discontinued to avoid every form of mass-gathering and up-close interactions. The ripple effect of Covid-19 was the inescapable grim reality of a steep and steady economic decline all over the world. The virus-led pandemic soon started taking on an even more sinister shape of a 'hunger pandemic' as millions stared starvation in the face.

Hunger caused by the lack of victuals during the pandemic led to a steep rise in stress and depression, and in extreme cases, substance-abuse and domestic violence were the resultant coping mechanisms chosen by many. Hunger is a morbid equalizer – it has no religion, it spares no one. United by the common pangs of hunger, people across varied socio-cultural backgrounds came together as they joined hands in their fight against the paucity of food and adopted food drives such as "Each one, Feed one" to stave off the looming threat of malnutrition and possible starvation. The pandemic both caused and bore witness to several mass marches undertaken by migrant labourers travelling homewards in search of the assurance of food, and many lost their jobs and lives in this quest for stability.

For the rest who continued to trudge on, battling adversities which threatened to make them a part of the long growing list of lives lost to the contagion, adjusting to life in the pandemic meant embracing the norms of the 'New Normal'. With people being dissuaded from being a part of any and all public gatherings unless absolutely necessary, social functions were strictly monitored by State intervention and laws were put in place to ensure a miniscule number of attendees. All social gatherings were streamlined according to necessity, and chief markers of social rites of passages such as weddings and funerals could only include and accommodate a bare minimum number of people. As a direct consequence

of this arrangement, lavish spreads at weddings and feeding of relatives far and near at funerals were soon a thing of the past as the food offered began to assume more modest proportions (in a bid to avoid food wastage and also keeping in mind the reduced number of guests), and more often than not, food at such assemblies began to be served in packets rather than the table to avoid all forms of unnecessary up-close interactions. When at the end of the lockdown period, the 'unlock' phase witnessed the reopening of restaurants, large congregations were staggered so that only half the seating capacity of the restaurants were filled at a time, and servers, managers and cooks were sought to be vaccinated at the earliest opportunity to mark dining out as a safe option to be explored.

Sourcing food during the pandemic did not come easy to many. Consumables were collected through donation campaigns, and Food Banks and Kitchen communes began to be set up in residential areas to address the hunger pangs of those who could not fend for themselves. Food soon came to be associated psycho-socially with the semiotic function linked to middle-class values of resourcefulness. The pandemic successfully coalesced professional and domestic spaces, and with the new strategy of 'Work-from-home' firmly in place, men and women began to participate equally in the preparation of food, leading to a new cultural space of identity fluidity in the rigidly sexist patriarchal institution of the family. The Indian society was no exception to this.

When China recorded the first case of the Coronavirus affliction, little did the world realise the gigantic proportions this viral spread was soon going to assume, and how that would tamper the food supply and distribution chain and threaten notions of

food security all over the world. Rapidly changing human life and livelihood patterns over the next few months revealed the devastating rate at which the crisis was becoming a 'Public Health Emergency' of international concern. The UN report titled 'Pandemic Year Marked by Spike in World Hunger'² stated that:

On current trends, The State of Food Security and Nutrition in the World estimates that Sustainable Development Goal 2 (Zero Hunger by 2030) will be missed by a margin of nearly 660 million people. Of these 660 million, some 30 million may be linked to the pandemic's lasting effects.

What can (still) be done:

As outlined in last year's report, transforming food systems is essential to achieve food security, improve nutrition and put healthy diets within reach of all. This year's edition goes further to outline six "transformation pathways". These, the authors say, rely on a "coherent set of policy and investment portfolios" to counteract the hunger and malnutrition drivers.

The World Health Organisation issued several notices to create awareness among the general public to eat right, and eat healthy in order to combat the Coronavirus with a strong body and sturdy immune system. Food thus became a visual and gastronomic indicator of healthy living. To alleviate exacerbating concerns about floundering economies and failing food security systems, the world learnt to heal

itself from the pandemic by reposing its faith in alternate food preferences (prioritising super-foods and health drinks to boost immunity) and treating the Food Value Chain as a sustainable collective resource meant to be accessed by all members of the society.

Cooking Up Ideas to Survive the Pandemic: New Strategies and New Perspectives

"What marks the literature of plague, pestilence, and pandemic is a commitment to try and forge if not some sense of explanation, than at least a sense of meaning out of the raw experience of panic, horror, and despair." (Ed Simon)³

The act of writing in general and food-writing in particular has evolved during the pandemic as one such method of reclaiming hope amidst the despair and gloom set off by the deadly virus. Cultural and social analyses of food show that the Covid period placed it firmly as a way of returning to one's origins. Instead of processed and store-bought food, more and more people turned to local or home-grown produce, prepared in home kitchens with a definite aim to maximise yield from available items of consumption. While many rode high on the 'Dalgona Coffee trend' flaunting their newly acquired cookery skills on social media, others still straddled the thin line between life and death, utterly dependent on some form of sustenance to get them by from one day to the next. Instead of being relegated as a matter of individual concern, food became the State priority as it directly reflected the State's accountability in providing for the welfare of its citizens. Even in third-World economies, governments identified

2 UN Report. Joint News Release. "UN Report: Pandemic Year Marked by Spike in World Hunger". Rome, 12 July 2021. <https://www.who.int/news/item/12-07-2021-un-report-pandemic-year-marked-by-spike-in-world-hunger>.

3 Simon, Ed. On Pandemic and Literature. 12 Mar. 2020. <https://themillions.com/2020/03/on-pandemic-and-literature.html>.

'Food' as significant enough to be listed as 'Essential Commodity' and made necessary provisions for carefully monitored resource management under the diverse situations of duress triggered on by the pandemic. Thus, food became an important medium of articulating a human response to a pandemic seemingly beyond its control. Whether rich or poor, healthy or ailing, food came to signify a recognised stratagem to allay fears of death and emphasise 'eros,' or the quintessential human desire for life. In the context of a multicultural country such as India, this gastronomic trend of returning to the roots was not without its own psycho-social significance. By delving deep into one's traditional recipes, there was a revival of interest in one's lost or often neglected cultural heritage, and local produce and spices were championed in the dishes. This, in turn, led to a new awareness regarding fasting and feasting at this time of contagion. Mass awareness about following safety protocols during Covid encouraged people to either take up the task of cooking themselves or, when they were sourcing food from outside, to consciously opt for take-out food menus which were steadily replacing dine-in options. High-end restaurants like the Taj and ITC group of hotels quickly adapted to the changing demands of the culinary scene and devised their own apps such as Qmin, Foogo etc. to enable gourmand customers to savour gourmet food from the comfort and safety of their homes. The Oberoi group of hotels steered clear from teaming with online delivery partner platforms such as Swiggy and Zomato, and opted to reach out to customers by delivering the food via the hotel's own delivery professionals assigned for this specific task. Global brands such as Starbucks and Domino's also reinvented their ways of reaching out to more and more customers amidst the raging pandemic by

using technology to make the online order and contactless delivery of food a seamless experience. By embracing the digital format of the Cloud Kitchen, these restaurants now made it possible for customers to select through a wide variety and order food online from restaurant outlets located nearby, opting either for home delivery or takeout or limited dine-in, as the case may be. The packaging and delivery protocols were also changed to suit the need of the times, and as a result, use and throw cutlery, throwaway single-use menus, frozen meals, ready-to-eat packs, DIY meals, condiments bottled in sachet packs, doorstep no-contact delivery of warm and fresh food became the new staples in the hospitality industry. Walk-in passes to restaurants were checked, and star hotels revamped their safety measures while offering stress-free 'stay-cation' options to their visitors under the New Normal circumstances. Some hotels even forayed into exploring exigency options such as providing quarantine-packages to customers who could opt to stay in their rooms for the entire period of their isolation. Availability of oxygen cylinders, on-call doctors and nurses, and a chaperoned ride to the nearby medical facility in case of emergency were also advertised by such establishments to draw in customers looking for a safe-home experience at a hotel.

Feeding the Mind: The Hunger to Know

When confronted with the erraticism of etiology, the arbitrariness of infection, the randomness of illness, we must contend with the reality that we are not masters of this world. We have seemingly become such lords of nature that we've altered the very climate and geologists have named our epoch after humanity itself, and yet a cold virus can have more power than an

army. Disease is not metaphor, symbol, or allegory, it is simply something that kills you without consideration. Story is a way of trying to impart a bit of that consideration that nature ignores.

Ed Simon⁴

Just as Simon argues for the role of 'story' or 'literature' in according to human life the concern that the virus seemed to rob it off, the same ethics of care was sought to be perpetuated by man's active and sustained engagement with food, its acquisition, preparation, distribution and storage. The changing culinary landscape in the times of the Corona pandemic is testament to man's determination to sustain himself in the face of all obstacles so as to hold on to that which he holds most dear: life itself. By constantly experimenting with food choices, food sources, and methods of consumption of food, man is essentially trying to chart out ways to counter the deadly throes of the pandemic with that which is life-affirming and life-nurturing.

For a country like India, which ranks 102 in a list of 117 countries on the 2019 Global Hunger Index (Rukmini Nair), addressing the food problems of such a diverse and large democracy never comes easy. A pandemic only forces it to face a reality check where inequality breeds in every corner and hunger is a regular reminder of a social order trying hard to avoid a tryst with abject poverty. And yet, to survive the pandemic, India must resolve to find a way out of its persistent problems of malnutrition and hunger. Simultaneously, the existing healthcare system must be revamped to check the spread of the disease at the level of the physical and physiological, while the present education setup would need to be revived

and remodelled to provide cognitive support to minds plagued by the fears and anxieties spread by the highly infectious virus. "The hunger for knowledge or 'epistemic hunger'" (Nair) must first be satiated, for the only way to positively channelize curiosity about public health especially during the time of a raging pandemic is to foster research about the contagion itself. In the wake of the virus, the pandemic has elicited many doubts, questions and a sinister sense of unpredictability about these 'unprecedented times'. People are increasingly realising their gaps in knowledge and demanding rational answers with immediacy in a bid to allay their minds of unfounded fears and baseless superstitions. The need for answers about the complex nature of the rapidly evolving Coronavirus must be balanced with a guided approach to direct relevant queries to appropriate authorities who can responsibly disseminate information and educate unaware minds with accurate and rational comprehension of the present problem. To use an appetite analogy for curiosity, if hunger is compared to appetite, then uncertainty is to be likened to curiosity. While hunger causes a physiological discomfort caused by a lack of food, uncertainty causes psychological discomfort caused by a lack of information. Thus, just as appetite leads to a craving for food in anticipation of reducing hunger, similarly, curiosity engenders a craving for knowledge in anticipation of reducing uncertainty and ambiguity (Dajung, Sung-il). This is particularly true of the pandemic times. Once people are armoured with true knowledge regarding the nature of the pandemic and the best ways to counter or avoid it, they will no longer be 'hungry' for misinformation or be content with the 'false food' of superstitions, and the world will finally be ready to face the challenges that this new-fangled scourge throws at it.

4 Simon, Ed. On Pandemic and Literature. 12 Mar. 2020. <https://themillions.com/2020/03/on-pandemic-and-literature.html>.

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Perceiving 'Safe'-Ty during 'Stay Home': An Anthropological Account

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Abstract

The spread of COVID-19 has been identified as a pandemic since December 2019. Its outbreak has forced to alter the regular activities and thinking. Affected countries throughout the world promoted lockdown, duration of which varies in terms of the severity of infection over population. In India, the Government declared lockdown from 24th March, 2020 to 31st May, 2020 (as stood on 14th May, 2020) in four steps where people were asked to 'stay home' (except stepping out in necessity) to remain safe and to break the chain of COVID-19. Present study aims to interpret the subjective position(s) of seven participants that how they attach the meaning to 'stay home', lockdown and safety and, how far they find them 'safe' in this backdrop. They were selected through purposive and convenient sampling from home-setting and adjacent at Kona (Ward No. 50 of HMC) of Howrah, West Bengal. This study follows qualitative approach and ethnographic methodology. The data has collected through participant observation, semi-structured interview and case study, transcribed verbatim and analyzed through narrative analysis. It is the output of 15 days fieldwork. Each participant has addressed by pseudonym on request.

Key terms: *Lockdown, Stay Home, Social Distance, Crisis, Safety, Insecurity.*

Introduction

Many countries have reported thousands of cases of infected persons and deaths caused by COVID-19 since December 2019. COVID-19 is the disease caused by SARS-CoV-2, a type of Corona virus (CoVs). CoVs include a large family of viruses which cause several types of illness ranging from common cough-cold, respiratory, gastrointestinal and central nervous system diseases to a variety of lethal diseases. Most severity of CoVs has been represented through Middle East Respiratory Syndrome (MERS-CoV) and

Severe Acute Respiratory Syndrome (SARS-CoV; FIP, 2020).

Corona viruses are large, enveloped and have the largest genome among entire RNA viruses. They have crowns on outer surface; hence the name comes - 'Corona' means 'crown' in Latin (Li, 2016). All the viruses under Corona family easily adapt new environments through mutation and recombination that's why they are potential to affect new hosts and tissues (Li, 2016). They are zoonotic means they generally are transmitted among mammals, animals and birds, and affect them. The people have

been infected by SARS-CoV from civet cats and by MERS-CoV from dromedary camels while both have originated from bats. In human, CoVs is transmitted through direct close contact (about 6 feet/1.8 meters) with an infected person or contact with that person's respiratory droplets during cough or sneezing. CoVs are recently being accustomed with human and the outbreak of COVID-19 (Novel Corona Virus Disease - 2019) is new one, therefore there is no existing vaccines or natural immunity till date (FIP, 2020). Since the viruses spread over contact, the infection spreads over the areas and the countries very rapidly within few days that cause often pandemics, as was experienced due to SARS (2002-2003) and MERS (2012) and recent COVID-19 (Cui, Li, and Shi, 2018; FIP, 2020).

COVID-19 was first detected among the persons related to the large seafood-market in Wuhan City of Hubei, China in December, 2019 and caused death of many people. With a rapid pace it expanded throughout world within February, 2020. The World Health Organization (WHO) declared that COVID-19 is a "public-health emergency of international concern" (Li et al., 2020b) on 30th January, 2020 and on 11th March, 2020 declared it as pandemic. The symptoms of this disease as reported are fever, fatigue, dry cough, dyspnoea, pneumonia and severe respiratory problems (Holshue et al., 2020; Lam et al., 2020) and then death or even it may be asymptomatic (without symptoms) but causes death (Wu et. al. 2020).

In India, the first case of COVID-19 was reported on 30th January, 2020 and following its spread over India up to the middle of March, 2020 the Ministry of Health and Family Welfare, India became strict in controlling its spread (Roy and Roy Bhattacharya, 2020). Following the instruction of World Health Organization, United Nations, the Government of India

and the State of West Bengal have decided to keep close all government, government-aided, and private educational institutions from 16th March, 2020 to 31st March, 2020 in public interest (no. 85-SSE/20, dated 14.03.2020). After the declaration of *Janta Curfew* (22nd March, 2020) on 19th March, 2020 by the Prime Minister of India first phase of lockdown was implied from 24th March, 2020 to 14th April, 2020 (Release ID: 1607248, dated 19.03.2020). On demand of the situation, the period of lockdown got extended up to 3rd May, 2020 [No. 40-3/2020-DM-1(A) dated 14th April, 2020 and No. 1-137/2018-Mit-II(FTS-10548), dated 14th April, 2020]. Further the duration of this period became extended up to 17th May, 2020 [No. 40-3/2020-DM-1(A) dated 1st May, 2020] and later it extended to 31st May, 2020 [Press Information Bureau, 17th May, 2020]. Meanwhile, the state government declared that all the educational institutions would remain closed until 10th June, 2020. Following the instructions of World Health Organization, the Government of India instructed to obey the slogan 'stay home, stay safe' (image: Ministry of Civil Aviation, Govt. of India) and to follow the guideline like avoid close contact with people suffering from acute respiratory infections, maintain cleanliness by washing hands frequently, avoid contact with farm or wild animals, and must maintain social distance at least of one (1) meter for keeping people safe and breaking the chain of COVID-19 (F.No.11013/9/2014-Estt.A.III, dated 16.03.2020). This guideline has promoted in March, 2020 and till is asked to follow. Yet the cases of infection and death in India were reported as 74,281 and 2415 respectively as stood on 14th May, 2020 (source: State Government, *Anandabazaar Patrica*, 14th May, 2020, p.1).

Under these circumstances, the people of West Bengal like other parts of India

remained locked for fifty two (52) days (as on 14th May, 2020). General government and non-government official works, business, informal sector of economy, formal education, travel – all remained restricted to keep self and others ‘safe’ by stay at home during this period. At this juncture, the present study aims to explore and interpret the subjective position(s) of the participants on ‘stay home’, lockdown, safety and consequences in this spectrum.

Objectives

Present study has set two objectives that –(1) how the participants define ‘stay home’, lockdown and safety in the ‘stay home’ condition, and (2) how far they find them ‘safe’ in the present backdrop.

Methodology

The study has adopted qualitative approach following ethnographic methodology. Under the period of lockdown, the researcher inclined to select her home and adjacent as the research setting is located at Kona [Ward No. 50 of Howrah Municipal Corporation (HMC)] of Howrah District in West Bengal. Seven participants were selected through purposive and convenient sampling method. The data has been collected through participant observation, semi-structured interview and case study. The data has been transcribed verbatim and analyzed through narrative analysis. The study is an output of 15 days rigorous fieldwork. It represents an emic point of view where the experience and words of the participants were realized by the researcher from an insider’s perspective. In order to maintain the confidentiality pseudonyms have been used to address the participants on request.

The Findings

Following the inclination of the data, the

findings have been presented in two related sects – (i) identifying lockdown and ‘stay home’, and (ii) does ‘stay home’ validates ‘stay safe’.

i) Identifying Lockdown and ‘stay home’

Bharati Nag (63 years; Female) is unmarried, resides with her brother (65 years), sister-in-law (55 years) and two unmarried nephews (30 years and 23 years) at Bagpara, Kona. She serves as helping-hand in a nearby house of her locality. When she first came to know about the disease and its spread of Covit-19 on 13th march, 2020, she could not understand at all. After the announcement of *Janta Curfew* (22.03.2020) she still didn’t perceive the seriousness what was going on. At the very evening, when the Government of India declared lock-down from 24.03.2020 to 14.04.2020, she for the first time got afraid and took initiatives to know what corona is from neighbors and television. She admitted, *....I couldn’t understand all the words what people conveyed but I realized that I had to stay clean and must maintain distance from people. The disease spreads through breathing. How dangerous it is!! I used to take bath and clean cloths after returning home from service. Above all, whatever lockdown is, we have collected raw food items from several local clubs...it is amazing.*

On the query of pattern of distribution she explained, *systematic queue as is broadcasted via television did not take place every where... sometimes our queue made crowd...the members of few clubs could not manage it...*

Harvajan Tiwari (67 years; male) is the main earner of his family, consisting of his wife (63 years), son (35 years), daughter-in-law (30 years) and three grand-daughters (4 years and 5 months, 2 years and 5 months and 10 months respectively). On 19.03.2020, his daughter with her three children came to visit them and on sudden announcement of *Janta Curfew* and under immediate

implementation of lockdown they could not return home. Harvajan serves as sweeper in a company and his son is a Barbour. During this phase, all became dependent on Harvajan. The first declaration of lockdown made them stunt out about the scarcity of food.

Indulekha Nayek (39 years; female) is an employee of Panchayet Bhawan, Kolkata. She serves as Assistant in Upper Division since last 11 years. Her habit of reading newspaper regularly helped her to sense the evilness of spread corona virus throughout world from the beginning and she was silently prepared for facing some awful in near future. She stated that... *Just listening the date of Janta Curfew I took it as a trailer of upcoming days. I was quite prepared about it as the other countries were already suffering severely and were strict on lockdown as a strategy to combat. But the duration depends on the situation as we are experiencing...*

Piranjan Syannal (37 years; male) is an assistant professor, posted at a degree college of Kolkata. He is a regular follower of online news paper and other online sources for current affairs where he got introduced about the infection of Wuhan corona virus, COVID-19 and the way of spreading since the last week of January, 2020, although the difference between the concept of curfew and lockdown was blurred until 22nd March, 2020. He explained, when he first heard the term 'lockdown', took it simplistically that people can interact but within restriction to avoid infection. Till then he had no idea about the role and compulsory interference of police force to control the crowd during lockdown as is experienced. Under 'stay home' condition, he started to follow television (was not possible 'normally' due to shortage of time) mainly to get detailed information about the ongoing and gradually he grasped the situation that what to do up to 15th April,

2020. He continued, *as per the instruction of both Central and State Government, none is expected to stay outside home unless it is highly necessitated. I knew this red alert became applicable for the whole country. The happenings of lockdown suddenly stopped my daily routine, my scheduled responsibilities, my busyness and my senses. Before being accustomed with the new situation and preparing mind, on Monday (23rd March, 2020), a few well-wishers alerted me that all the shops, market would remain closed for indefinite period of time and the supply of food items would be stopped, immediately had to stock basic ingredients. My elder brother was suffering from typhoid since before lockdown. So single handedly I had to make a stock of food for a month. But I was wrong. I collected the items of particular amount as was consumed in a 'normal' month when all of us used to take food generally once in a day as me, my wife, my brother and my sister-in-law is working and most of the time was spent outside home. In such days of altered schedule, me and my mother missed to predict that all of us would be at home so would take food four times daily firstly, secondly, more amount of food would be consumed by each as there the phase denied the rush of working-days, and thirdly, boredom of 'stay home' position and leisure would trigger to prepare varieties and consume much than that one consumed before. At the end of 1st week I realize expenditure of this month was going to jump double than that of before.*

Moreover, I had to stock more insulin for my mother, consult doctor repetitively for my brother, bring medicines for both of them and to collect food for my baby for a month – for which I had to go out repetitively in a day. As a result, initially I became very confused throughout the 1st week of lockdown that what would be my priority – to support my family or to protect myself from infection?? First measure of remaining 'safe' was 'not to go out until it was extremely necessitated' – what I was serving the tasks each of which was principally necessitated.

How it was possible to find priority!! I was very confused.....(after a pause) Even after repetitively asking for a list of vegetables that I could buy for at a week, my mother, I did not know why, could not prepare that. I think, she might think that it would be a problem to preserve huge vegetables or secondly, might be hesitated that if I bought all vegetables from market there would left nothing to buy from the lady who sells vegetables locally (though she sells in high price), and that might damage local relationship and dependency with the mother. Then I had to go out again... and again.....to collect those as was listed daily though I had no habit or idea of buying vegetables before that..... I got shocked and upset even after trying my level best to support the family, my mother continued to buy vegetables from the lady..

I was afraid too, repetitive out going was increasing the risk for me.....If by chance, I got infected it would spread among the whole family...(being very excited and worried) I was really afraid that how I can protect my baby!! All these made me extremely worried

Above all, at the end of the 1st week when my brother was still suffering from fever, cold, cough and breathing, he became anxious that he was probably infected by COVID-19. His anxiety was spread over my mother too. I was consoling him and tried to build his confidence. But his fear took him away from receiving food. He was becoming weak day by day. At the middle of 2nd week of lockdown, doctor suggested to test his blood. On the very day of collecting blood report, I became solely anxious and feared that if really he had infection!! Then already we were carrying the virus in our body!! Oh! God!! What would be the next!!!!... I felt awfully helpless, insecure and depressed... at last, when I got the report in hand and informed that my brother was suffering from typhoid and was COVID negative, I could breathe freely for the first time on that day...

Though there was a relaxation too, that regular journey of working day has been postponed... But these sudden drastic alterations created

huge physical and mental pressure, tension, restlessness; detachment from any preferable job like reading, severe insecurity, worry, and panic of family members, irritation.....all accelerated blocking my senses for few days...

Thus the first half of lockdown I went through severe instability... but when the phase extended up to 21st May, 2020 I became quite accustomed, status of my mind shifted towards research. I start to observe that, during the lockdown some drivers of Toto, van, auto and rickshaw, some plumbers, the daily earning of whom has been stopped, are selling vegetables at lanes and at market area....

As the vehicles for carrying basic daily-necessities, like vegetables, are allowed on road, some of them together hire a 'Chota Haati' (matador) and run towards Burdwan or Hooghly after attaching a label of 'Sabjir Gaari' (car for vegetables) on the front. There they collect whatever available in cheap price and sale those in higher amount at local market of Kona. Gradually they find it very profitable, as for example, they buy four lemons by Rs. 4/- and sale here those by Rs. 25/-. The shifting of occupations appears to be a great opportunity to them that some of them started thinking to continue it permanently. But I don't know if they are aware or not that, after lockdown the business committee of the market will allow only the sellers having trade license. Then continuation of selling vegetables is either the fantasy of the new comer or they are thinking to maximize their profit within this phase of uncertainty.

When he became countered that might be it was essential for them to earn daily livelihood, Piranjan opposed that, no...no... many of them familiar to me that they can proceed without this step but they are prone to earn that provokes them to go risky and affected zones. And (putting stress on the term and with anger)...those persons hardly have minimum sense of hygiene, when and how to sanitize hand... they don't know if they are receiving or spreading the virus whatever they are going,

where the permanent sellers were provided permission and guideline of maintaining hygiene (by local police station) during staying at market. Interestingly, some Toto drivers have attached label namely, hospital emergency, on the front of Toto and are serving passengers covering short distance. However, my points are – (1) immediate shifting of economic position during crisis under lockdown and, (2) where the endeavor of entire population is expected and instructed to combat COVID-19 by breaking the chain through maintaining social distance and proper hygiene, due to the casualty of some members the risk increases rapidly and we, in spite of obeying all measures, are becoming prone to be infected.

..... So what lockdown is as is defined by the administration and the definition emerged from my experience – are totally different.

Trishita Chatterjee (12 years; female) is a student of class VI at Bantra Tarasundari Balika Vidyalaya, Howrah (ward no. 21). Since first week of March, 2020, she got introduced with the term 'corona' from the discussion of friends. She could not understand the concept, the pandemic nature of corona virus and the event of lockdown clearly. Before the day of *Janta Curfew*, from the conversation of family members she gradually perceived that she was going to remain home for a long period of time where she would not attend her school, dancing school or even coaching class. She grasped 'lockdown' as, *being locked within home....never going outside of home....*

Initially she was enjoying the leisure during 'stay home' phase. Her daily routine before lockdown consisted of early rising (5 a.m.), getting fresh, preparing lesson of private tutor and school, getting ready for school within 9.30 a.m., going to school within 10.30 a.m., returning home at 5.30 p.m., having Tiffin and watching television, attending coaching class or preparing

lesson, having dinner and going to bed within 11 a.m. The period of lockdown relieved her from the rush. She suddenly felt, her world has come to a halt from 27th march, 2020.

Mou Banerjee (37 years; female) got married 14 years ago. She resides at Bagpara, Kona, Howrah, with her husband (40 years), daughter (12 years), father-in-law (70 years) and mother-in-law (68 years). She is primarily a home maker and had the passion of sewing which she converted into profession tailoring (of women) since last 5 years. In the context of knowing the term 'lockdown', it was observed that she could not distinguish the concepts of 'lockdown' and 'curfew'. She stated when she, for the first time, heard about one-day curfew, she could not get that how is it possible to control an infectious disease within one day! After that during experiencing the extension of the 'stay home' phase immediately she got worried that, *the notion of 'stay home, staysafe' is very significant and in reality staying home can keep us safe to some extent.....but there are some people who will die due to starvation as maximum of the people depends on daily-earning. How they will survive?*

Monish Dey (41 years; male) works as medical representative since 20 years. The term 'lockdown' was unknown to him before 22nd March, 2020. Due to the suffering from typhoid from 18th March, 2020 to 8th-12th April, 2020, he did not clarify the consequences of 'stay home'. Jokingly he stated, *I could not leave the bed for 20 – 24 days...if the lockdown did not take place, 'no work, no pay' would be implied for me...*

He stated, during his suffering he could not perceive the alterations of the surrounding. Following his recovery, as he continued, *I started to observe and grasp the situation I noticed all shops are closed... often I got news of biting persons by police for making crowd.... The price of all household*

materials have increased drastically that the monthly expenditure is jumping day by day.... I spend much time with my wife and son daily.... after recovery I have gone through many story books...and written three poems.....within few days, since the last week of April, 2020, I became bored of reading books and writing... then slowly I turned to complete some pending jobs like repairing electric connection of light etc. of home.....these together, as I perceived, is lockdown.

ii) Does 'stay home' validates 'stay safe'?

Though the employers asked Bharati Nag to take leave during the phase she denied on the ground of feeling comfort. Yet since 02.04.2020 she postponed the duty after the decision of her nephews. She stated *I couldn't understand their views that they forced me to stop attending that house during lock-down to maintain social distance but they asked and allowed me to take grocery items provided by the local clubs where crowd was obvious. Then what is safety? Stay home and denying distancing or attending service but maintaining distancing? I am illiterate, I have no knowledge that what will keep me safe (with a look of inferiority and grief).*

.....In general we, the family members, don't interfere with one's personal matters but the phase of staying within home is making the nephews arrogant, impatient and mal-behaved where they used to spend the whole day outside home.....(She whispered).....On the 6th day of staying at home a severe quarrel took place on very silly issue. They extremely misbehaved with me. It continued for three days and on 10.04.2020 I got bitten by my nephews and my sister-in-law. I felt helpless and insecure at home. Was the lock-down period really safe??.....I have no crises of food... thanks god, the grocery stores still provide items... but the environment of the house is becoming intolerable day by day.

Then I decided to resume my duties at that house where I get friendly atmosphere and joined

on 11.04.2020. Two-hand distance between two persons is naturally maintained here throughout years as none interferes into my job. I feel here more secured, comfortable and safe which is absent at my home.

Harvajan Tiwari's living experience during 'stay home' is horrible. Chaos of six children throughout the day – the week – and the month in one-roomed rented house became intolerable to him. He grieves that, *in the 1st week of lockdown collecting milk for the children was difficult. We were not facilitating by the food items provided by local clubs. A few local people made noise that my family would not receive 'relief' as I am a staff of railways...they were not understanding my helplessness...me and my family is now in severe financial crises...*

....at the end of the day, I feel we are alive still today. But can't think about the next... is the disease really dangerous than hunger??!!!!

Indulekha Nayek was confident on her perception that, she does not think that 'stay home' provides total safety of members of a family. She continues, *.....any one of the members must to go outside to buy the necessary stationary items, vegetables, medicine, milk etc from whom everyone of family may be affected. Suppose, all stay homes and receives aids provided by the government, yet the infection can be spread over via that medium. How can I say that staying home is safe? Yet, staying home minimizes the probability of getting infected but for how many days? When the lockdown will get dissolved we have to go out and how I will be sure that the person beside me at working place or bus and so on is not affected....where the carrier remains unaware about the affectedness till the symptoms appear... (Worriedly stated) the kids learn to interact, communicate and share mainly through playing. Presently, they are restricted to meet others outside home. Can they spontaneously mingle with others in future? Can I really send my son to school? Can I mingle with my colleagues, relatives and friends easily as was experienced before the fear*

of spread corona?? Can I hug them cordially as before?? Can I arrange or attend family occasion and enjoy like before??....no..no... it will not be possible within upcoming few years. This episode has injected fear in minds which breeds panic and distrust for closest one outside home. We are apparently 'safe' at present but in reality are losing our relationships, trust and closeness in one hand, and on the other, a big crisis is waiting in near future in terms of economic insecurity.

The present situation permits only producing some agricultural and food items..... (She was worried and excited) all types of manufacturing goods has postponed for indefinite time. Suppose, there were working twenty five labors in a factory. Initially the factory may provide necessary foods or money for one or two weeks or for one month... but what will happen after that?? As per a report, the economic growth of a country depends on two factors: trust on government and trust on the company, i.e., relationship among persons involved. The event of COVID-19 ruins the feeling 'trust'. For instance, I rely much on print-media and television for comparatively correct information. But I think, recently the State Government tends to hide the actual status of affected and dead people caused by COVID-19 to minimize panic. They probably have no option other than hiding. But the fact is, the episode is generating and encouraging the enemy named 'distrust', the spread of which is much rapid and the effect is long-lasting than the spread of the disease COVID-19. Then is our nation potential enough to combat the situation safely?

Apart from these, I got information that, Wuhan of China experienced four times more cases of divorce during the lockdown period. Being locked, many people feel vulnerable and depressed where they become aggressive and misbehaved. These instances multiply the case of home violence rapidly. Although many of the men are sensible enough that they often participate in home making with their mother,

wife or sister. But this picture comes from only economically and psychologically stable families. But the scenario of the financially weaker section attached with informal economic sector, is different. I think current joblessness and insecurity of job even after dissolving lockdown phase makes people insecure, vulnerable and consequent depressed. And, as the most common and easiest way of expressing insecurity of men is out bursting on wife and children in India, the cases of home violence within this group are increasing in India as well. Then, are these women and children are 'safe' being in locked situation??

Is it called safety overall!! No....never. Safety is now far away where still it is un-answered that when the situation will completely be controlled and the period of remaining locked will be dissolved...

Following the experience of Piranjan Syannal, the concept of 'safe' and 'unsafe' is typically relative and lockdown is now meaningless. He argued, to me, lockdown is a strategy to combat an infectious virus and duration of it depends on the statistics of infection, infected, recovery and death. And, as far my realization goes, the government hides actual data in this regard. Actually the number of infected and dead is huge than that is declared. According to my observation, during lockdown majority of people became financially insecure; ways of earning stopped. But the number of people remaining starved is less as many of them are facilitated by government or non-government aids. Even there are many who are receiving 'relief' though they have affordability. Thus, the concept of 'stay home' in reality is generating its own meaning which varies individually. Actually, 'stay home' does not have enough potential to protect all people from infection...any of the family members has to go out... and, where the crises dominates over all mingling, i.e., spread of infection cannot be fully controlled. As per my opinion, if entire population of some districts like Howrah,

Hooghly, Kolkata etc. – where migration and travelling is very frequent, goes through rapid test then we will find that we all are already carrying the virus in our bodies. Main factor is immunity – the person whose body can immune the virus is apparently fit and non-infected as after fourteen days automatically the virus gets inactive, and the person whose immunity power is weak becomes infected and gets labeled. Recognizing ‘green zone’, ‘orange zone’ etc. - these are funny. Are you sure that all the persons under ‘green zone’ have gone through rapid test and assured non-affectedness? Nooo...

Therefore, now my point is...none of we are ‘safe’ in ‘stay home’ period. We all are affected by corona – either by sense, or by emotion, or by anxiety, or by infection. The factor is ‘immunity’, as I said. May be my mother would expire if she was not taking insulin and medicine for heart every day. The persons who are suffering from acute disease(s) and fail to control by medicine by chance, they get infected and may expire by corona. Though corona is a man-made bio-explosive that’s why it adopts in all environments and changes nature accordingly, but the chance of death due to its infection is just 2.5%. If we take care of our health properly by taking sufficient Vitamin C throughout the phase of spreading, we will remain ‘safe’. I mean, if your body can immune the virus, maintain social distancing in proper sense and stay sanitized, you are ‘safe’ in or outside home; and, if your body lack immunity, you may be infected by corona virus in spite of staying at home. ‘Stay home’ is not just enough to keep us ‘safe’, rather ‘immunity’ keeps us ‘safe’.

I think the implication of lockdown is, therefore, to take time of preparing of the administration that it can build up more effective measures for controlling COVID-19 at first, secondly, of preparing more effective quarantine set up, and thirdly of inventing effective medicine of controlling the infection.

Trishita Chatterjee elaborately explained how her life has changed. From 27th March,

2020 to 4th April, 2020 she tried to maintain the habit of early rising and early sleeping. She practiced some work-out during this week. Gradually a tendency of laziness is grasping her life. Now she wakes up at 7.30 a.m. She makes tea for her grandparents and parents; she takes *Sattu* and starts learning lessons at 8 a.m. – 8.30 a.m. She does not get interest in work-out any more. Daily she attends the class of mathematics, geography and science through phone call of one of the private tutors, from 10.30 a.m. to 12.30 p.m. Then she watches television for a while, takes bath and then lunch within 2 p.m. At afternoon she again watches movies on television or takes rest or draws and at 5 p.m. she goes to the roof and plays *Ludo* with family members or plays with her pet-dog. At evening after taking *Tiffin*, she either goes through books or participates in indoor game with others.

This new schedule of life relaxed her to a great extent. Though she grieved that the seriousness of practicing lesson has declined drastically during this phase and she cannot assure that all subjects are practicing with same importance yet she is confident that she can perform well in examination. In spite of missing the school life, school-friends, practicing dance at dance class and outing badly, this phase gives her the chance to experience life with leisure. She can read books or write answers with time, without having the fear of ‘time is running out’. Her mother often monitors her in learning or preparing lessons. Recently she is highly enjoying two other issues...*firstly, I am reviving my hobby. Rapid pace of scheduled life had taken me far away from practicing drawing. (She grieves).....There was no time to draw anything....no time to play and no time to think... within fourteen days (being very excited and with brightening eyes), I drew many portraits, sceneries, cartoon characters and designs. I am now often remaining busy*

in drawing. And secondly, I am enjoying the online class provided by the private tutor who at first sends the study material via social media (Whatsapp) and explains the matter later over phone call.

But when the question arises about safety, she explained with hesitation that, ...if we maintain distance from others, obey some rules as are instructed, and if we use mask...there will be no fear of infection of corona virus. We will be safe then in terms of not getting infected by the virus.

...but, there is another point I want to say that, I am missing my father. He was very affectionate to me and hardly used to rebuke previously...now-a-days, he always remains angry and rebukes me...even when I play with the pet, Ghontu, he scolds me – 'why are you disturbing Ghontu??' I feel very upset. I miss him. Presently often he shouts at me and my mother... I feel sad...very sad...why the lockdown distanced my 'Baba' (father) far away from me????!!

As a mother Mou Banerjee feels the postponing school, regular class and coaching class is severely damaging the sincerity of education. Though her daughter (12 years) prefers learning books and spontaneously practice lessons, regular assessment of progress is highly essential which is possible in scheduled 'normal' school-life and which is hardly possible under locked situation. She grieves that, it is almost impossible to my daughter to assess the improvement of learning except mathematics. I know that, she is now free from the rush of everydayness where she even couldn't breathe freely. But this ongoing relaxation is going to be very harmful for near future after dissolving the lockdown. The process of coping with pre-scheduled rush will be very difficult to manage. Thus the 'safety' of health will ruin the future of my daughter. Moreover, from the panic of infection I will not send her to school at least for one month after its opening.

I think, stay home never refers to 'stay safe' in many terms, even not in terms of being safe from the infection of the virus. 'Stay home' never is capable to keep us 'safe' - firstly, as at least any one of the family members has to go out to collect food items from various shops. Initially we heard that the virus can not affect people at a distance of 3 feet. But now the scientific investigation claims that the virus is continuously coping itself (with the surrounding) through modifying its nature. Therefore, when a person, may be my husband, is touching money, vegetables, or packets of snacks...may be affected easily. Don't you know the case of the Ja**wal family of Salkia of North Howrah, where Mr. Ja**wal became infected by corona through vegetables and got expired?? (After the assurance of the researcher she continued)... Then, even after washing vegetables repetitively how I can be assured about its' safety when we all know that the virus doesn't dissolved in water!!! And, is it possible to wash all the things, brought from market, by alcohol-based sanitizer which can break the outer cell-membrane of the virus, so that it becomes inactive!!! (Being solely excited) No.....no!!!!... So we are extremely un-safe even after staying at home.

Moreover, at present, the infection is being asymptomatic. That's why, it is impossible to identify the affected person even she/he is standing beside me where maintaining 'social distancing' of one meter is next to impossible in vegetable market till date. No, I never say that, she/he is guilty; that person remains totally unaware that she/he has got infected and is carrying the virus....that person may be me...may be you...and through me you and your family may become infected....isn't it!!! Thus, how can one assure that 'stay home' means 'stay safe'!!!

She further put forward her opinion strongly that, the lockdown period would get success to keep people safe literally when the door of the home would remain locked, none would go out in any term. She believes, in future, a day will come when

everyone will carry the virus in body. May be the body will cope to fight back so that the human will not get ill, i.e., they don't have not to be hospitalized....but everyone is going to be the vector. She illustrated her opinion that, *how many days the government will maintain the lockdown?? They extended the period up to 3rd may.....then it got extended up to 21st may.....they may further extend the period up to December, 2020.....Max to max within few months, we will return to our regular pre-scheduled life. Meanwhile if the medicine does not invent....then how the spread of the virus will be controlled???! For instance, there is the medicine to control the virus of viral-fever... so it does not matter that how many days the period sustained... the matter is the invention of the medicine against the virus. Otherwise, just after lockdown, when we will go out like before, the virus will be spread from one to five, from five to twenty five, from them to the rests....thus the spread and the disease will be continued. There must be an end which is not possible until the invention of the medicine..... and, as is broadcasted in television, to test the effect of the medicine to control corona will take at least 16–18 months. Therefore, it can easily be calculated that the spread of corona will sustain at least for 1.5 to 2 years....if the test reports that the medicine is not working then the controlling of the virus will take more time, at least another 1 to 1.5 years... here is my point that, it is not possible to validate 'stay home' for 4 years.... so everyone of us somehow will be the vector. In sum, staying home does not provide safety; the invention and access of medicine will keep us safe....*

The term 'safe' arises another question to me that, does 'safety' means only remaining disinfected from the virus?? What's about the economic safety of majority? (She explained excitedly).....we all are linked with each other. We can consider a case of any wedding occasion as an instance. It consists of not only enjoyment, but a series of supportive events conducted by so many categories of people linked to one another

such as, decorators, caterers, camera operators etc. A wedding occasion helps to provide the livelihood of the mentioned. If I just consider the issue of catering, there are also so many persons – some persons to clean the tables and utensils, some serve as cook and some as helper – all they earn daily wage. This season, running out within lockdown, is the season of Bengali wedding. How many people earn sizable amount within this period.... All of them are now unemployed and so un-waged. Are they 'safe'?? Do they have any security of getting food every day? Suppose, if the cameramen do not get security how they will provide money to their housemaid? If the housemaid lacks her salary how she will buy food!!.....thus everyone of the chain is suffering from financial insecurity and from feeling un-'safe'. So my realization is, as the days are running out... the people will die due to starving not for infection.....

Next, we, the middle class are unsafe too, and suffering the most. The persons of lower class category can take the help of others; can receive food from relief-club. They have the access to receive money and food provided by the government relief fund. But we, the middle class never can extend hands to receive help from government or from others... therefore, we have to buy food items though the price has increased enough even over its MRP (Maximum Retail Price).....the middle class generally lacks enough savings....they earn money and spend accordingly... now, under the present situation earning is being stopped..... how can we buy things??!!...the savings has already been used within this one or two month(s)... Now, what is left for them?? May be, many of them lose their job after withdrawal of the period... then?? And, above all...the price of everything is increasing drastically. The price of an egg has increased from Rs. 3/- to Rs. 8/-. My brother used to buy vegetables and groceries monthly from market place in reasonable price. Following lockdown, all the big markets remained close and he has to buy things from the local grocery shop within

his colony. The grocer is now refusing him and others like him, to give things as he is not his regular customer(s) in spite of having stock.

In addition, I solely realize that the phase keeping locked made me awfully insecure and unsafe in terms of relationship and emotion. I used to remain busy throughout day. Daily routine consisted of early rising, preparing breakfast and lunch, getting ready to drop child at school within 10.30 a.m., visiting clients and returning home within 1 p.m., serving lunch to husband and in-laws within 2 p.m., then making cloth up to 4 p.m., getting ready to bring daughter from school, serving Tiffin to her and dropping her at coaching class within 5.30 p.m., preparing dinner, bringing child at 8.30 p.m., making cloth whenever getting time, serving dinner to all and going to bed accordingly. At present, I awake at 6-6.30 a.m. and whole day is spending in cooking special food items after the request of my father-in-law. Out of the fear of getting infection he stays quite depressed at present. He and my mother-in-law follow news channels at television regularly and get more afraid. He is in locked condition too. His panic, loneliness, depression... all the negative emotion is sublimated through shouting and the attraction of mouthwatering food. My husband often gets very aggressive and adamant in terms of financial crises. I used to find relaxation in the work of sewing which became impossible under the haphazard routine where I am managing all the household duties single handedly without having any help of the housemaids (both of them have postpone duties due to lockdown). At this juncture, I often feel bored, helpless, irritated, aggressive, restless and frustrated. Even my husband does not getting my pulse. The situation is becoming intolerable to me day by day....I am not finding myself within the ongoing schedule...within the phase of 'stay home' I am gradually losing my-'self'....

Monish Dey assumes that, if every person strictly maintains the measures to combat COVID-19, as are instructed by WHO, the

Central Government and State Government of India, all remain safe. He thinks, *we definitely will be safe at home...and, the rate of infection will also be slow down.* 'Stay home' in strict sense will break the chain. Virus can't live without having vector. If the infected person really maintains quarantine, if others maintain social distance and cleanliness, take proper diet ... then definitely the chain will break. During staying home, human bodies may generate the immunity to fight against the virus as well. Thus 'stay home' position is potential to keep us safe from the infectious disease.

After a pause, he continued with another angle of long-term 'stay home' situation...I am a medical representative and in parallel, practice as physiotherapist. Due to this indefinite phase of staying home my financial position is being narrowed. Even I think, after withdrawal of lockdown the path of my services will not be smooth like before where the 'touch' will be a major factor. I have to start from zero. I and my colleagues are afraid of being even sacked from the company. We have to meet doctors daily. Presently many doctors visit patient via video calling. In that case, if they will not attend chambers how the meeting will be possible??.... We have to visit nursing home, hospitals etc. where social distance may not take place. Then will the doctors allow us to meet in near future? The company sends gifts and samples for doctors. Will they receive those immediately after lockdown? Moreover, will a patient allow me to serve as physiotherapist in near future!!! No. It will not be possible due to fear of being infected. Then, I feel quite unsafe during the time. Remaining un-infected is not the last word of remaining safe at all.

Above all, the manager of our company asked us to serve online. The company instructed to attend and arrange online meeting with doctors and with others for 8 hours daily as per the schedule, provided in everyday basis. We refused the given situation. Serving 8 hours in a

'normal' day at outside home is expected and convenient.....but serving 8 hours by staying at home!! How it is possible? Working outside home and working from home is not parallel. At home, there are some duties we can't avoid....so we refuse. Then the company declared 'no work, no pay' for April and May, 2020. And, it was disclosed on 30th April at 11 p.m. under this circumstance, my earning became totally unsafe and unsecured....I don't know how and when the situation will become stable!!

Observation

The term 'lockdown' and its basic measures including staying at home and going outside only in necessity(s), maintaining social distancing, hygiene and cleanliness, using mask and hand-sanitizer repetitively and taking healthy foods along with vitamin C were not familiar to the participants before declaring lockdown (by the Government of India) from 24th March, 2020 though three among the seven participants heard about the spread and severity of the corona virus since January, 2020 and onwards via media up dates. The meaning of the term and consequences were unknown to them until experiencing the days of lockdown with- the news of audio-visual and printed media; sensing safety from infection to some extent along with the feeling of insecurity and panic of getting infected; material and financial crises; conversation and synthesis of neighbors, family members and others on this issue; and staying at home. The persons gradually perceived the phenomenon of 'stay home' and lockdown along with attaching subjective analysis grounded on their educational, financial and social background, and on the age, sex and nature of crises.

The persons with primary or no formal education coming from the financially

deprived group identify lockdown as helpless and crises; crises of daily essential materials, finance, food, job, rising price of goods and health. Due to lack of proper knowledge often they became panicked following the gossip of others but where severity of starvation becomes more crucial than getting infection they had to step out. 'Stay home' often generates home violence irrespective of social, financial and educational background. Aged educated persons having sound affordability define lockdown as crises as well but they enjoy 'stay home' by tasting different mouth-watering food-stuffs and watching television. Habit of keeping touch with media and daily affairs and efficiency in analyzing events helped the affordable service holders and self-employers to keep mental preparation for lockdown yet the meaning of crisis arrived differently to them. The lockdown, here, is assumed as postponing scheduled work and daily journey, and storing increased demand of high amount and varieties of ingredients and other necessities. Overall, such sudden event of lockdown and its consequences, the people (irrespective of any background) faced uncertainty and vulnerability. The lockdown has been sensed also as the duration for taking administrative, medical, clinical and legal preparations against the mentioned disease. But 'stay home' is perceived as spending more time with family members, planning for travelling, unexpectedly finding quality time for stimulating hobbies and enjoying leisure, feeling imprisoned and depressed, and waiting for resuming regular life. The meaning of 'stay home' and lockdown appear same to the school-students who define those in terms of havoc alteration in daily activities, attending online classes through digital platforms, recurring hobbies and missing school-life.

The term 'safe' has been implied by

WHO and the governments of affected countries like India to indicate staying safe from getting infection of corona. During earning livelihood, meanings of the term have expanded diversely ranging from the perspective of health and hygiene to the social-cultural, educational, financial and psychological constructions. As the data explored, the person who serves as helping hand in other's house experienced cruelty and insecurity in own family during 'stay home' and found herself 'safe' in working place. The range of feeling vulnerability and unsafe of a teenager and a home-maker reflects somewhat similar. They experienced outburst of their family members on them due to irritation, panic and frustration during staying home but there left no option to overcome like the previous case. The old man found him helpless in collecting food for eleven members every day. He was passing through the dark out of the fear of son's unemployment after withdrawal lockdown. The medical representative found gloomy about the continuity of his service as well. The assistant professor under study experienced a series of pessimistic events throughout which he felt several scarcities and hazards in life though he has financial security. Additionally, the lady working at Panchayet Bhawan found worried on economic crises and currency inflation after lifting of lockdown that would invite difficulties. All through the participants experienced vulnerability showing different forms and different subjective insights.

The sessions with the participants unearthed the forms of instability and insecurity in terms of biological health, social relationship, economic growth and quality of education in upcoming future. As soon as the order of lifting lockdown would be circulated, mass of people may deny or be casual in keeping social distance

and may forget to maintain hygienic measures. The feeling of getting relieved may inspire them to go outside home for shopping, earning, travelling, schooling, relaxing and satisfying other necessities. Thus the lucidness of members may invite more difficulties in controlling the spread of virus and the disease until the invention and availability of the anti-dose of COVID-19. In parallel, the social relationship, i.e., social health may be disrupted out of distrust, panic and hesitation in conducting direct communication. Arrangement of ceremonial occasion(s) and participation, which is fundamental to maintaining social relationship, may not be accomplished successfully. The threats on social relationship may negatively affect the young and children where denying mingling with others may enhance the possibility to become introvert and self-centered. Economic growth, as is assumed, has been postponed, revival of which will take time. A lion portion of wage labors may lose their job. Many people attached to informal and private sectors may have to shift their occupation and to start from the beginning. As a consequence of economic disruption, currency inflation may be experienced in near future. In case of education, the systematic practice and direct monitoring within institutional province is being disturbed. Daily life schedule of the students has altered significantly. With the help of online classes learning practice is continuing majorly by the private tutors, although the govt.-aided schools do not facilitate the same. E-learning over digital platforms and over various communication technologies gradually becomes the prime way of education and may retain its essentiality still after dissolving lockdown out of the parents' hesitation in sending students at educational institutions. The process of teaching-learning, evaluation,

promotion to next class in the present session (2020-21) appears blurred to the parents and the students till date. In sum, the habits of practicing, learning, teaching, attending institution, assessing the progress of students are severely damaging and changing due to the outbreak of COVID-19.

The present study hereby reflects that perception of safety is exclusively subjective, contextual and closely is associated with the meaning attached to lockdown. The study unearths the voices of the insiders that 'stay home' may or may not protect the person from being infected but the consequences of lockdown definitely brought hazards - made people unsafe, helpless and unsecured in basic terms of livelihood. In brief, lockdown and 'stay home' has portrayed disaster that affected all spheres and layers of society, brought drastic changes and damages social lives where reappearing the balance may not be easy enough and may trigger many unexpected crises on the ground of economy, polity, religious belief and practice, education, social health like safety, adjustment, harmony, trust and others.

This study, thus, broadens the scope of studying unemployment and occupational shift on the milieu of economic disruption; financial crises and home violation; vulnerability in altered everydayness and resilience; effect and affect of COVID-19 pandemic on education; reliability of digital platforms in teaching-learning process; impact of 'stay home' during lockdown on the equations of relationship in family and beyond; vulnerability and tensions between 'lockdown schedule' and resuming 'daily schedule' after lockdown; staying home - imprisonment or relaxation and so on.

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Problem of Evil and Idea of Life: A Philosophical Investigation during the Lockdown Days

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Key words: Coronavirus, Lockdown, Evil, God, Religion, Life, Science

Introduction:

We are passing through a peculiar perilous time that never happened in remote past, as far as our memory concern. People in and around the Earth are facing a serious threat to their existence and a grave situation mingled with fear and anxiety is prevailing all along. As and when we pay heed to the TV channels, the death cases are learnt to be increasing like a speedometer. Men, though social in nature, are being instructed to maintain social distancing that could be the only escape route to rid of the adverse situation. But people, at large, are ignoring social distancing sometimes due to their immaturity and again being misguided by the veil of ignorance. So, administration at different stages of capacity, have to enforce 'lockdown' orders to keep people stay safe in their own household. In India, the Union Government made an announcement of lockdown orders on 24th March, 2020. We, being responsible citizens, do carry out Govt. orders in the hope that the situation will soon come back to normality. But experts all over the world opine that it will take a couple of years to restore normal course of livelihood. Thus circumstanced,

we are in a state of disorder, both mental and intellectual.

The very day, on which our town was declared 'Red Zone', I stood in front of our door in the afternoon and found no one in the street. The big playground in front of our house lay deserted as if it was a hollow square. Once, the ground was full of merriment and loud confusing noise. The youngsters were to kick football as forcefully as the passersby treading upon the street were scared. But, now, there was no trace of life anywhere. The narrow street of the town was enthralled by the territory of loneliness. This morning when I write down this treatise, I get two phone calls, one from the remote part of the district of South 24 Parganas and the other from Tribeni in Hooghly. One of my friends from the University of Calcutta, who resides at a village in the Sunderbans, has informed me that most villages in the interior areas of the Sunderbans are suffering from scarcity of food. My brother-in-law from Tribeni has almost yelled over phone stating that he has unofficially been terminated by the Company he has been assigned to. Even the Company does not pay him the

outstanding salary. Though food in the nearest market is available, he has no money for buying food for his family. It is not the case of my friend alone or of my brother-in-law, almost a thousand billion people all round the world, are suffering extensively due to inadequacy of the basic needs. This unprecedented suffering causes from the disgusting cell of the molecular virus, named 'Novel Coronavirus' or 'Covid-19'. Nearly two hundred thousand people on the earth have already been affected by the notorious Virus and three hundred thousand death cases have been reported so far. The masses so far affected by the novel virus, have fallen into an inexplicable harsh situation that endangers their family men too. It is now clear that an evil in disguise of a virus has appeared at the doorstep of human civilization.

Evil and Coronavirus:

'Evil', the concept, more or less we're familiar with, has a deep significance. According to 'Concise Oxford Dictionary', evil is 'harmful or tending to harm, and unlucky causing misfortune'¹. Again, the 'Encyclopedia of Britannica' defines evil as 'the absence of good which should be and could be present'². Whatever the definition be, it is an undeniable assertion that evil is the force that can destroy happiness, well-being and integrity of human society. It is the chief reason which causes misfortune and wretchedness of human existence. Such an evil, from philosophical perspective, is of two kinds- moral evil and natural evil. 'Moral evil inheres in the wicked actions of moral agents and the bad consequences they produce'³. For example, torturing innocent people and infants, volitional actions like rape and murder generate moral evil. On the other hand, 'Natural evils are bad consequences that apparently derive entirely from the operations of impersonal

natural force, e.g. the human and animal suffering produced by natural catastrophes such as earthquakes and epidemics'⁴. Clearly, in connection of natural evil, human being has no role, though he is the worst sufferer. Whereas, moral evil is originated by actions taken by man and at the same time the sufferer of such evil is the man in question. Coronavirus is no doubt an evil that have affected every corner of the Earth. The origin of the virus is still remained unknown. There are two kinds of opinion as regard to its origin. First, Coronavirus is a kind of 'Zoonotic Virus' duly borne and carried off by the bats and animals of such species. The Virus has sprung into the human body through an intermediate host in the Wuhan Market, China⁵. Secondly, a conspiracy theory suggests that the virus emerged from a virology laboratory and has been brought into the mainstream⁶. So, we cannot categorize Coronavirus either as natural or moral evil. Nonetheless, the notorious evil has a fierce and adverse impact on civilization, regenerating the traditional controversy regarding the problem of evil.

The Problem of Evil:

In philosophy of religion, the well-known problem of evil has taken its shape in different ways. There are a number of versions of the 'problem of evil'. Out of all these the popular version as represented by John Hick goes like this:

'If God remains ever loving, there must have a desire to do away with all evil. Again, if God is all-powerful, He should be in a position to abolish evil. But evil exists; therefore God cannot be called either omnipotent or perfectly loving.'⁷

Another version of the problem of evil has been cited in the works of David Hume. In course of a discussion relating to scepticism Hume expresses concisely:

'Is [God] willing to prevent evil, but not able? Then he is impotent. Is he able, but not willing? Then he is malevolent. Is he both able and willing? Whence then is evil?'⁸

Actually, the problem of evil presents itself in form of a dilemma. When two beliefs of human tradition clash each other, the dilemma arises. The problem of evil stems from the two traditional beliefs: i) God, an omnipotent, omniscient, and ever benevolent being, exists, and ii) evil, in its many appearances, exists too.⁹ When we affirm the two beliefs at the same time, it would lead us to a logical inconsistency. The problem of evil actually gets us at the conclusion that God does not exist. Let us see how we come to the conclusion- If God is there, the very existence of Him comes to be true being all powerful in benevolence, omnipotent and omniscient. Possessing such divine qualities, the Almighty ought to have a desire to cast off evil attitude from human heart. He should have the knowledge to abolish evil. Furthermore, He would have the power to eradicate evil forever. But in fact, evil does exist in every sphere of life. Therefore, we may conclude that God does not exist.

But such a conclusion may neither be accepted by a theist nor by the masses. People, by and large, do have religious faith. They even think that the Almighty will rescue them from the blind alley of adversity. Even if not being stern believer, we incline to pray to God when we find ourselves in distress. Therefore, Atheism has become a necessitate mandate for human being as far as our intension is concerned. Keeping in mind people's inclination to the Absolute Being, all major religions have put the concept of 'God' in the central position of their system.

Though each religion has distinct philosophy, mythology and rites, yet all religions believe in God as 'Creator',

'Sustainer' and 'Destructor' of the world and instruct us to worship Him for bringing greater good to humankind. Thus, the members of the religious sects will have to lose their religious sentiments unless there is an unambiguous acceptance of God possessing all the supreme properties. Therefore, it is of utmost need for mankind to solve the problem of evil, otherwise all the religious norms and mythological texts related to God will face the grave possibility of non-existence. Consequently, the deep-rooted faith of the common people upon the Almighty will be shaken too.

When the outbreak of Novel Coronavirus has reached its vertex, we witness that most of religious organizations have closed their places of worship. The preachers of religion, whom we adore from the core of our heart, cannot show us the exact way to escape from the jaws of the dread virus. It seems, the omnipotent God being the immanent force of highest good has lost His magnificent powers to resist the evil in form of Coronavirus. Then why should we admit the long-striving concept of God and the mythologies centered round Him? If the Almighty is unable to wipe out the miseries and misfortunes resulting from Coronavirus outbreak, why should we acknowledge Him as the Supreme Being? These questions are frequently rising up all over the world. Now, the slogan is spreading through media and through social media too, which we may read out- we must bow down to science, instead of religion and God as manifested by the men of religion, for Science alone will be able to rid us of the hostile situation. Hence, the deadly pandemic has once again questioned the existence of God in context of the problem of evil in a more vivid structure, not only from the line of observance of the philosophers, but also from the common viewing of the masses too.

Solution to the Problem of Evil:

If we look back to the history of philosophy, we would see that philosophers and religious teachers from both the East and the West have been trying to solve the problem of evil by their own way of understanding. John Hick, in his famous book 'The Philosophy of Religion', points out that the solution to the problem of evil is quite acceptable in the three kinds of theodicy in Western philosophy, viz. Austinian Theodicy, Irenaean Theodicy and Processed Theodicy.

The first solution was advocated in Irenaean Theodicy based on the thoughts of Reverend Irenaeus (130-202 A.D), an early Christian Bishop. In this theodicy, proposed solution to the problem of evil was pointed out in a different way from that of St. Augustine. We may jot down in nutshell the main points of argument placed in the Irenaean Theodicy-

- i) God created the world as a good place (but not paradise) for developing human persons both spiritually and morally.
- ii) Through evolutionary means, God brought about human persons with freedom of the will and the capacity to mature in love and goodness.
- iii) Evil is the result of both the creation of a good soul-making world and of human choice to sin.
- iv) By placing human persons in an challenging environment, through their own free responses they have the opportunity to choose what is right and good and thus to gradually grow into 'mature persons' (exhibiting the virtues of patience, courage, and generosity, for example) that God desires them to be.
- v) God will continue to work with human persons, even in the afterlife if necessary, by allowing them opportunities to love

and choose the good, and thus on the day of great dissolution everyone will be brought into a right relationship with God.

Another important solution to the problem we observe in the thoughts of Saint Augustine (354-430 A.D.), the greatest Christian Philosopher of antiquity. He tried to solve the problem of evil in theoretical way which may be furnished below in form of an argument:

- i) God once created the universe, and everything in it was good.
- ii) Some of God's creation namely persons were provided with the good gift of freedom of will.
- iii) Some of these created persons – first angels, and then human beings – freely chose to turn from God's goodness; that is, they 'sinned' and fell from their state of perfection (i.e. the 'Fall' of humanity).
- iv) U- turn in human will or sinning as may be called in other word, brought about both moral and natural evil in the universe.
- v) Evil, though brought about by created persons, is not a thing or entity; rather, it is a metaphysical deprivation, or lack, or privation, of the good.
- vi) Almighty Himself will finally rectify evil when He judges the world, ushering into His eternal kingdom those persons who have been saved through Christ, and, further sending to eternal hell those persons who are wicked and disobedient.

Lastly, in the modern times, A.N. Whitehead (1861-1947), Charles Hartshorne (1897–2000) and John Cobb, Jr. (1925–) introduced the 'Process Theodicy' and tried to uphold a newer outlook into the metaphysical framework. We may briefly jot down their position in the similar manner as above:

- i) God is not the transcendent creator

who created the world 'ex nihilo' (out of nothing), but is God-in-the-world. This is pantheism in which everything is in God but not everything is God.

- ii) God is neither omniscient nor omnipotent in the traditional sense; God's power is shared with other entities and God's knowledge increases as His experiences are gathered.
- iii) The universe is characterized by evolution, process, and change, some of which has been brought about by the self-determined free choices of entities including God and finite persons.
- iv) The unique idea of freedom of choices is sometimes a property of goodness, and, again evil-eyed in other cases. There is the hope that evil will continue to be engulfed as all experiences are synthesized in God's own conscious life.

From the above discussion it is clear that the theist philosophers have tried to solve the problem of evil from their own point of views. Admitting the problem of evil and the idea of God together, they have shown the exit from the inconsistency in their own way. In the days of lockdown, when we are call in question the relevance of religion and the capability of God, one can easily survey the dictums of theodicy's and draw the supposition of a good God.

Evil is not a problem:

It is important to note that philosophy is a study which never treads upon a single line. Diversified ways of thinking have enriched the bucket of philosophy. When philosophers are busy at making solution to the problem of Evil, some philosophers are not at all worried over the problem. If we study the philosophical thoughts of Benedict Spinoza, we would see that he did not admit the real existence of evil. Spinoza (1632-1677), a rationalist philosopher, upheld the

theory of substance. In this theory he tried to prove that Substance is equal to God and is further equal to Nature (Substance = God = Nature). So, by preaching pantheism he argued that God or Nature, the only Substance, is inseminated or devoid of any predicate. Therefore, the evil, supposed to be a negative predicate, is not adhered to Nature or God; it is a mere projection of human mind. Therefore, no existence of evil is accepted on the earth.

Similarly, in Western philosophy, George Wilhelm Friedrich Hegel (1770-1831) developed his Idealistic Philosophy where he denied the ultimate reality of evil. Maill Edwards, the noted reviewer, in this context said, 'to Hegel also evil is unreal, existing from partial point of view but disappearing from the point of view of the whole. What seems evil from limited standpoint is really, in the popular phrase 'good in making' a necessary stage in the dialectic movement from mere innocence to rational self-determined virtue'¹⁰.

If we minutely go through the pages of Indian Philosophy, we would find certain reflection of the philosophy of Spinoza. Even almost two thousand and eight hundred years ahead of Western philosophy, it was from the hermitage of Indian Philosophical tradition which declared the non-entity of evil. In the 'Taitariya Upanisad' there is a verse which clearly affirms- 'anandadhyava khalvimani bhutani jayante, anandena jatani javanti, anandam prayanty abhisnavishanti'. It means the animate beings are originated from bliss and life is pervasive amidst bliss, and, even at the time of dissolution all go into bliss. The Upanisad further declared that the Bliss is nothing but Brahman. Therefore, in Upanisadic philosophy life is thought to be an existence full of blissfulness, where no existence of evil is admissible. But, Adi Samkaracharya,

the profounder of Absolute Monism or Kevaladvaitavada, clarified and interpreted the teachings of Upanishads in his own way. He held that Brahman, the absolute reality, is nothing but Pure Consciousness, Pure Bliss and Pure Existence. At the same time the animate being is ontologically identical with Brahman. But by illusionary power Maya, we cannot realize the Brahman within ourselves and the blessedness has fallen down from our entity. In fact, in practical life we must come across evils and miseries, but from transcendental or actual point of view there is no real existence of evil. Thus, Samkaracarya thinks that evil has temporal and inauthentic existence. It is important to note here, according to Samkaracarya, neither evil nor misery has a real existence, whereas bliss, the essential nature of Brahman, has a real existence.

The thought of Adi Samkara has got its poetic reflection in Tagore's philosophy. Rabindranath Tagore, in 'Naivedya', magnificently held, 'So far I go to Thy, infinitely, wholeheartedly, keeping in my mind alert, I find neither misery nor demise nor the feeling of separation anywhere'. But he did not deny evil as a whole. He accepted the reality of evil as a fact of the finite existence¹¹. He held that evil is an imperfection and its essence is impermanent.¹² Evil, being a state of limitation to Tagore, is nothing but a stage leading to perfection or a state of highest good. If there is no evil, we may not comprehend the highest good. He used an analogy to explicate his thought. When a child is eager to learn walking, in the process of learning he falls again and again, even he gets wounded. If we view the process with our emotional eye, the sight would appear to us as very cruel. But if we observe the process in different outlook i.e., we realize it as the steps for his development, the whole event would be the source of joy. Actually,

according to Tagore, failure and evil and miseries are necessary steps for realizing the perfection, the supreme good. So, as a finite existence and means to achieve the supreme good, we have to go through the evil, but we should not go astray in the woods of evils. Our consciousness must be directed to overcome the evils for achieving the supreme good. Clearly, Tagore and Hegel, the two great thinkers from two different worlds are holding the same line of thought.

In the days of lockdown when our mind is poured with irresolvable conundrum, we think that it is very difficult to escape from the endangered claws of Coronavirus. For it is continually mutating in diversified ways. We cannot deny its reality; we cannot change its entity. But we can change the process of our thinking. Following the footsteps of the great philosophers, we may think the evil Coronavirus has emerged in the world with a view to showing us the just way to the highest good. The modern man has been facing the consequences of his own deed. Driven by selfish motive he takes bribe, does immoral deeds and causes harm to environment. If we take the effect of Coronavirus in positive sense, we have to admit that this effect has given humankind a chance for re-thinking. If we do not refrain from unethical deeds, if not learn a lesson from the pandemic, we will naturally engross into the alley of decay. In the days of lockdown, confined inside the four walls, we have got enough time to think over ourselves, to rise up from within rejecting the defamatory attitude toward life. Thus, the dread effect of Coronavirus has given man a new opportunity to turn round to his original entity which is described in the Upanishad as 'Brahman'.

Idea of Life:

It is relevant to note here that Indian Philosophy does not sketch life as the lawn

of suffering. But in western thinking we observe that life is not free from sufferings and worries. The concept of evil is a serious point of discussion in Western philosophy. In the poem 'The Lotus-Eaters', Alfred Tennyson, the noted poet, says:

*To war with evil? Is there any peace
In ever climbing up the climbing wave?
All things have rest, and ripen toward the grave
In silence—ripen, fall, and cease:
Give us long rest or death, dark death, or dreamful ease.*

In the tragedy 'Macbeth' William Shakespeare aired a pessimistic view when he said, 'Life is tale told by an idiot, full of sound and fury, signifying nothing'. In the philosophy of Schopenhauer, we find the glimpse of pessimism. The idealist philosopher held that life is not only full of evil deeds; it is inevitably and essentially evil. 'For to live is to will, to will is to desire, to desire is to feel want of something, which implies suffering'¹³. Thus, Schopenhauer repeatedly asserted that it is better not to be born than to be born. But in Indian philosophical thought life is not outlined like this. Life has been taken for like a vast ocean, immense and blissful. The Upanishad said, 'Yadidan Kincha prana ejati nihsritam', 'Prano virat'. That means everything in the world has arisen from immortal life and is vibrating with life and life is immense. Life is like the great universe where stars and galaxies are continuously generating and decaying, but still alive. Birth and death are mere events of great life. It has neither decay nor decrease. Our body, mind and senses are subject to decay but Life is above all these and is eternal in nature.

Conclusion:

If we think our life as a subject of bodily happenings and accept it only through sensual organs, we would surely be affected by the distress of evil. Even if, the

dangerous virus, COVID-19 does not affect our body, we still remain frightened by hearing the news of its spreading. Ministers are shouting: 'don't fear, stay at home'; journalists are campaigning: 'stay home, stay safe; fear not, we have to overcome the Coronavirus'; psychologists do suggest: 'don't be anxious, make yourself busy at doing anything whatever you like, staying at your home'. But they hardly explain why we should not get afraid of the frightful virus. The philosophers can give us the answer. Philosophers opine that we are ontologically imperishable as because we possess immense sphere of life. Philosophers of The Upanishads claimed, 'Sarvayapi se bhagavan tasmāt sarvagataḥ civaḥ' - The Supreme being is all-pervading, He is the innate good in us. So, we need not get worried about the effects of Coronavirus. It is a mere evil of temporal existence. Perhaps this evil comes into existence to teach us many good practices toward perfection in life. Standing in midst of the unprecedented situation if we make out the intensity of our potential powers and try to resist COVID-19 in scientific manner, the humanity will, in nearest future, will surely escape from the adverse situation. Religion and science are not actually contradictory to each other. For religion gives us extensive faith by which we can make out the immenseness of life. On the other hand, science provides us certain knowledge to make life comfortable and enrich the journey of life in a rational mode of thinking. A joint venture of religious faith and scientific knowledge, therefore, will make the human being able enough to combat the dreadful Coronavirus in near future. Life will win over the battle, surely, not sailing a voyage through evil, but through the long and wide avenue of goodness achieved by a positive approach to life.

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On the Immunity and Vaccination of Coronavirus Infection with Special Reference to COVID-19

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Introduction

Coronaviruses are enveloped and contain a large helical nucleocapsid inside. The viral envelope is studded with **spike glycoprotein trimer (S)**, **hemagglutinin-esterase dimer (HE)**, **membrane protein (M)**, and **envelope protein (E)**. In particular, the protruding spike protein (S) characterizes the crown shaped virion, which it was named after. "Corona" (crown) refers to the characteristic appearance of virions under electron microscope with a fringe of large, bulbous surface projections creating an image reminiscent of the solar corona. **Family Coronaviridae** is subdivided into **four genera** depending on their genetic structure: **alpha, beta, gamma, delta** coronaviruses.^{1,2} α and β coronaviruses infect only mammals. **SARS-coronavirus (SARS-CoV)** responsible for **severe acute respiratory syndrome (SARS)** and **MERS-coronavirus (MERS-CoV)** responsible for **Middle East respiratory syndrome (MERS)** are classified as **Beta coronavirus**. Human coronaviruses (such as **229E** and **NL63** of the α genus) were known to cause only mild respiratory infections, until the SARS outbreak.^{1,2} The SARS-CoV outbreak

that occurred in 2003 has drawn attention, since it was fatal, causing SARS. Another human coronavirus, **MERS-CoV**, was responsible for a severe form of respiratory infection that occurred in 2012 in Middle East countries. During the **December of 2019** another highly infective variant of SARS, **SARS-CoV-2** had emerged. This is a zoonotic virus and believed to have jumped **from bats to humans**, and within a very short span of time it turned into a pandemic. Almost no country is spared. It has harmed the human civilization in a way almost without precedent. The whole world is struggling to deal with its devastating effects. To get an early relief from this virus we are in dire need of an effective vaccine. To add to the misery, it was soon realized that the virus is changing its antigenic signature exceptionally fast, which only complicates the development of a potent vaccine that could be effective globally. For the development of an effective vaccine we must revisit our repertoire of knowledge regarding the pathophysiology of and immunity against SARS and MERS. With the advent of genomics, proteomics, and many other recent technical advances, it has now become possible to describe the virus-host "**interactome**" in much greater detail.

Pathophysiology of Covid-19

COVID-19 disease is characterised by **three phases**. The **viral invasion** and **pulmonary growth** phases are followed by the final **hyperinflammatory phase** (in severe cases), which can lead to **severe acute respiratory distress syndrome** (ARDS), impaired cardiac function, septic shock, multi-organ failure and finally, death.^{2,4} It has been observed in several clinical investigations that though there is no significant gender bias in prevalence of COVID-19, **morbidity and mortality is significantly higher in males than in females**. SARS-CoV and SARS-CoV-2 viruses are known to primarily affect the pulmonary system. These viruses bind (with their surface S protein) with cells of the pulmonary tract that express **ACE-2** (Angiotensin converting enzyme-2) on their surface. The concentration of ACE-2 gradually increases deeper inside the lung and reaches its highest concentration on the **type-2 pneumocytes** of the lung alveoli. That is why alveoli are the most affected parts of the lung. Severe alveolar dysfunction at the terminal phase of the disease, in patients with multiple co-morbidities, steers the trajectory of disease progression to an irreversible fatal end. Severe disease is characterized by **dyspnoea, hypoxia, and extensive lung involvement** on imaging. This can progress to **respiratory failure** requiring mechanical ventilation, **septic shock, multi-organ failure, and death**. The initial phases of COVID-19 pathology are caused by damage of the alveolar epithelium due to overwhelming viral replication while terminal morbidities are essentially the products of immunopathology. Following are the steps of disease progression-^{2,3}

- Type-2 pneumocytes are damaged by fast replication of the virus.
- This cellular stress initiates release

of chemokines by the cells of the alveolar lining and following the up-concentration gradient of these chemokines alveolar macrophages reach the sites of assault.

- These chemokine-activated macrophages then release pro-inflammatory cytokines like IL-1, IL-6 and TNF- α .
- These cytokines spill into the capillaries surrounding the alveolar lining.
- Pro-inflammatory cytokine release induces relaxation of smooth muscles lining the capillaries which results in a flooding of the capillaries with blood. With a concomitant cytokine-driven contraction of the cells lining the capillaries around the affected alveoli, there is a sudden increase in vascular permeability.
- Plasma spills into the interstitial space compressing the alveolar wall. A portion of the liquid enters into the alveolar cavity and dilutes the layer of surfactants released by the still healthy type-2 pneumocytes.
- Decreased concentration of surfactant molecules increase the surface tension of the alveolar epithelium. So, the combined effect of decreased surface tension within the alveolar cavity and increased fluid accumulation in the interstitial spaces around the alveoli, the alveoli start collapsing.
- Interstitial fluid accumulation and alveolar collapse decrease the rate of gas exchange by the type-1 pneumocytes of alveoli.
- This pulmonary oedema driven hypoxemia triggers increased work of breathing and simultaneous increase in blood pressure.
- Increased blood supply into the capillaries of the affected regions of the lung further worsens the situation by

pouring more liquid into the interstitial spaces.

- Attracted by the chemokines released by the activated macrophages another sentinel of innate immunity arrives at the affected alveolar battle fields. While killing the virus and virus-infected cells, neutrophils also release ROS (reactive oxygen species). These ROS further damage the type-1 and type-2 pneumocytes.
- Debris from dying cells start accumulating at the bottom of the affected alveoli decreasing the gaseous exchange even more.
- Accumulation of a greater number of activated macrophages and neutrophils turns the situation pro-inflammatory.
- The pro-inflammatory cytokines released by the macrophages and neutrophils start spilling into the general circulation (**cytokine storm**) reaching the different organ systems of our body making the capillaries more permeable. This is also called **systemic inflammatory response syndrome (SIRS)**.
- Vascular hypotension sets in, leading to septic shock and multi-organ failure. This is a potentially fatal stage.

Several epidemiological analyses of the infectivity, morbidity and mortality of SARS-CoV-2 infection have revealed that there is no gender bias in infectivity but when it comes to morbidity and mortality there is a clear-cut bias against males.⁵ In several studies it has been found that **fatal cases** are approximately **2.5 times more in males** as compared to females. This skewed nature of fatality due to SARS-CoV-2 infections may stem from an inherent difference in cytokine chemistry of men and women. **Men** are known to have a **more TH²-skewed cytokine chemistry (anti-**

inflammatory) than **women** who maintain a **more TH¹-skewed cytokine chemistry (pro-inflammatory)**.⁶ This gender-bias in cytokine chemistry may influence the trajectory of disease progression. An effective timely tinkering of this cytokine chemistry is likely to have a therapeutic value. Successful vaccines can be formulated and designed keeping the above mentioned inherent immunochemical difference between men and women.

Immunity and Vaccination-

Immunity is the ability of the human body to tolerate the presence of material indigenous to the body ("self"), and to eliminate foreign ("nonself") material. This discriminatory ability provides protection from infectious disease, since most microbes are identified as foreign by the immune system. Immunity to a microbe is usually indicated by the presence of antibody to that organism. Immunity is generally specific to a single organism or group of closely related organisms. There are **two basic mechanisms** for acquiring immunity, **active** and **passive**.^{6,7}

- **Active immunity** is protection achieved by the person's own immune system after getting infected by a pathogen. This type of immunity usually lasts for many years, often during a lifetime.
- **Passive immunity** is protection by products produced by an animal or human and transferred to another human, usually by injection. Passive immunity often provides effective protection, but this protection wanes (disappears) with time, usually within a few weeks or months.

One way to acquire active immunity is to survive infection with the disease-causing form of the organism. While exceptions (like malaria) exist, in general, once

persons recover from infectious diseases, they will have lifelong immunity to that disease. The persistence of protection for many years after the infection is known as immunologic memory. Following exposure of the immune system to an antigen, certain cells (memory B cells) continue to circulate in the blood (and also reside in the bone marrow) for many years. Upon re-exposure to the antigen, these memory cells begin to replicate and produce antibody very rapidly to re-establish protection. Another way to produce active immunity is by vaccination. Vaccines interact with the immune system and often produce an immune response similar to that produced by the natural infection, but they do not subject the recipient to the disease and its potential complications. Many vaccines also produce immunologic memory similar to that acquired by having the natural disease.

Many factors may influence the immune response to vaccination. These include-

- the presence of maternal antibody
- Chemistry and dose of antigen
- Route of administration, and the presence of an adjuvant (e.g., aluminium-containing material added to improve the immunogenicity of the vaccine). Adjuvants can enhance the immune response in a variety of ways, mediated by their induction of pro-inflammatory cytokines.
- Host factors such as **age, gender, nutritional factors, genetic makeup, and coexisting disease**, may also affect the response.
- Immune induction is much more efficient if an immunogen is presented by professional APCs, such as macrophages and dendritic cells.
- For many viral infections, both immunoglobulin and cellular effector systems can participate in protective immunity, but their relative role varies for different viruses.
- Immune induction can be manipulated to favour either **TH¹** (cellular) or **TH²** (antibody) responses, by formulation of immunogen, route of immunization, and the use of adjuvants.⁸
- Presentation of antigen to the mucosa-associated lymphoid system (MALT) can induce local immunity, which may provide an effective barrier to viruses that invade via mucosal tissues.

Categories of vaccine-^{8,9}

Vaccines can be of two basic types: **live attenuated** and **inactivated**. The characteristics of live and inactivated vaccines are different which determine the contingent of immune system that will be boosted and deployed.

Live attenuated vaccines are produced by modifying a disease-producing ("wild") virus or bacterium in a laboratory. The resulting vaccine organism retains the ability to replicate (grow) and produce immunity, but usually does not cause illness. The majority of live attenuated vaccines available contain live viruses. In case of live attenuated vaccines there is no need to keep booster dose schedules in the vaccination program as minimal but continuous growth of the introduced agent inside the body keeps the relevant contingent of our immune system on continuous attention. But there is always a risk of gain of virulence through genetic mutation. Whenever a live attenuated vaccine does cause "disease," it is usually much milder than the natural disease and is referred to as an **adverse reaction**. Currently available **live attenuated viral vaccines** are measles, mumps, rubella, vaccinia, varicella, zoster (which contains the same virus as varicella vaccine but in much higher amount), yellow fever, rotavirus, and influenza (intranasal).

Live attenuated bacterial vaccines are bacille Calmette-Guérin and oral typhoid vaccine.

Inactivated vaccines can be composed of either whole viruses or bacteria, or fractions of either. Fractional vaccines are either protein-based or polysaccharide-based. Protein-based vaccines include toxoids (inactivated bacterial toxin) and subunit or sub-virion products. Most polysaccharide-based vaccines are composed of pure cell wall polysaccharide from bacteria. **Conjugate polysaccharide vaccines** contain polysaccharide that is chemically linked to a protein. This linkage makes the polysaccharide more immunogenic. Inactivated vaccines are not alive and cannot replicate. The entire dose of antigen is administered in the injection. These vaccines cannot cause disease from infection, even in an immunodeficient person. Inactivated antigens are less affected by circulating antibody than live agents, so they may be given when antibody is present in the blood (e.g., in infancy or following receipt of antibody-containing blood products). Inactivated vaccines always require multiple doses. In general, the first dose does not produce protective immunity, but “primes” the immune system. A protective immune response develops after the second or third dose. In contrast to live vaccines, in which the immune response closely resembles natural infection, the immune response to an inactivated vaccine is mostly humoral - little or no cellular immunity results. Antibody titres against inactivated antigens diminish with time. As a result, some inactivated vaccines may require periodic supplemental doses to increase, or “boost,” antibody titres. Some examples of currently used **whole-cell inactivated vaccines** are- **inactivated whole viral vaccines** (polio, hepatitis A, rabies and

influenza) and **whole inactivated bacterial vaccines** (pertussis, typhoid, cholera, and plague). **Fractional vaccines** include **subunits** (hepatitis B, influenza, acellular pertussis, human papillomavirus, anthrax) and **toxoids** (diphtheria, tetanus).

Polysaccharide vaccine

Polysaccharide vaccines are a unique type of inactivated subunit vaccine composed of long chains of sugar molecules that make up the surface capsule of certain bacteria. Pure polysaccharide vaccines are available for three diseases: pneumococcal disease, meningococcal disease, and *Salmonella typhi*. The **immune response** to a pure polysaccharide vaccine is **typically T-cell independent**, which means that these vaccines are able to stimulate B cells without the assistance of T-helper cells. T-cell-independent antigens, including polysaccharide vaccines, are not consistently immunogenic in children younger than 2 years of age. Young children do not respond consistently to polysaccharide antigens, probably because of immaturity of the immune system. Repeated doses of most inactivated protein vaccines cause the antibody titre to go progressively higher, or “boost.” This does not occur with polysaccharide antigens; repeat doses of polysaccharide vaccines usually do not cause a booster response. Antibody induced with polysaccharide vaccines has less functional activity than that induced by protein antigens. This is because the predominant antibody produced in response to most polysaccharide vaccines is IgM, and little IgG is produced. This problem can be solved by a process called **conjugation**, in which the polysaccharide is chemically combined with a protein molecule. Conjugation changes the immune response from T-cell independent to T-cell dependent, leading to increased immunogenicity in infants

and antibody booster response to multiple doses of vaccine.

Recombinant Vaccines

Vaccine antigens may also be produced by genetic engineering technology. These products are sometimes referred to as **recombinant vaccines**. Five such genetically engineered vaccines are in use in many countries. **Hepatitis B, human papillomavirus (HPV), and influenza** (one brand) vaccines are produced by insertion of a segment of the respective viral gene into the gene of a yeast cell or virus. The modified yeast cell or virus produces pure hepatitis B surface antigen, HPV capsid protein, or influenza hemagglutinin when it grows. **Live typhoid vaccine (Ty21a)** is *Salmonella typhi* bacteria that have been genetically modified to not cause illness. **Live attenuated influenza vaccine** has been engineered to replicate effectively in the mucosa of the nasopharynx but not in the lungs.

COVID-19: Leads of clinical importance

- SARS-CoV-2 is a highly infective form of Coronavirus infecting people from over 200 countries and territories.² Its high infectivity is primarily due to the higher affinity of its surface S protein for ACE-2 receptors present on the type-2 pneumocytes of alveoli. It has been found that the S protein of SARS-CoV-2 has approximately 20 times more affinity for the ACE-2 receptors as compared to that of SARS-CoV.^{10,11}
- There is no age and gender-bias in terms of infectivity but when the morbidity and mortality is taken into account there is considerable age- and gender-bias. Mortality is approximately 2.5 times more in males as compared to females. Aged people are highly vulnerable to fatal consequences.^{11,12,13}
- SARS-CoV-2 is capable of changing

its antigenic signature very fast – rendering many protein-based vaccine candidates less effective in inducing protective immunity.²

- Majority of infected people are, now, known to be asymptomatic.^{14,15}
- Morbidity or mortality is due to immunopathological events like pulmonary fibrosis, cytokine storm, septic shock and multi-organ failure.
- Males maintain more anti-inflammatory cytokine chemistry than females, who are known to have more pro-inflammatory body chemistry.
- A considerable proportion of fatal cases are of patients already suffering from one or more co-morbidities like hypertension, cardiovascular disease, and lung disease. These conditions are more prevalent in men and linked to smoking and drinking alcohol.

The pandemic has created unprecedented public/private partnerships. **Operation Warp Speed (OWS)** is a collaboration of several US federal government departments including Health and Human Services and its subagencies, Agriculture, Energy and Veterans Affairs and the private sector. Within OWS, the US National Institutes of Health (NIH) has partnered with more than 18 biopharmaceutical companies to accelerate development of drug and vaccine candidates for COVID-19 (ACTIV). The US government is choosing three vaccine candidates to fund for Phase 3 trials under Operation Warp Speed: Moderna's **mRNA-1273** in July, The University of Oxford and AstraZeneca's **AZD1222** in August, and Pfizer and BioNTech's **BNT162** in September.¹⁶

Conclusion

Humans inhabit all the continents of the world except Antarctica. Human

populations throughout the world are not genetically homogeneous. Communities of different continents and territories are used to deal with different communities of pathogens and parasites. The highly polymorphic MHC (major histocompatibility complex) have region-specific contingents of alleles selected to fight with locally prevalent communities of pathogens and parasites. So, immune responses against a new pathogen are expected to be different in different human populations. SARS-CoV-2 has made the scenario even worse by rapidly changing its surface protein signature. The mRNA and protein-based candidate vaccines will not be effective equally on a spatial and temporal scale. An infusion of knowledge of cytokine-based immunomodulation and immunoprophylactic measures with vaccinology may complement the limitations of vaccination programs.

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Work/Play/React from Home during the Pandemic: Labour and Leisure in My Cup of Tv's Reaction Video to BTS's Music Video "Life Goes On"

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When the rapid spread of Coronavirus disease led the World Health Organisation to classify it as a pandemic on March 11th 2020 (*who.int "Archived: WHO Timeline- COVID-19"*), nations around the world undertook various measures to arrest the progress of infection. With the implementation of lockdown and social distancing rules around the globe in response to the COVID-19 crisis, posts related to people's experiences of the pandemic proliferated on social media platforms. Although the specificity and intensity varied according to nationality, class affiliation, gender identity etc., the baseline of collective pandemic experience especially amongst the working populace aside from the omnipresent anxiety about mortality, seems to revolve around job insecurity and the prospect of utilising unstructured time in the wake of workplace closures and economic slowdown. Amidst this global crisis, the narrative of quarantine productivity has come to dominate social media platforms as users have taken to the internet to document themselves mastering new skills and turning hobbies into side businesses, generating a compulsive need to produce evidence of performing profitable labour in the guise of leisure. This particular social media trend seems to be symptomatic of the so-called "hustle culture" as Nick

Martin says in Lorenz's article titled "Stop Trying to be Productive" (Lorenz "Stop Trying to be Productive"). Lorenz identifies this competitive need to continually update one's skills to adapt to an unpredictable job market and to transform every human activity into value-enriched labour fit for the circuit of capitalist exchange as the uniquely American phenomenon of "always-on-work culture" (Lorenz "Stop Trying to be Productive"). This particular situation is not confined to the United States alone. In her article "Panic over Pandemic Productivity", Sara Mahmood observes that Indian web users are similarly preoccupied with virtually curating the evidence of their achievements during quarantine leading to a decline in mental health (Mahmood "Panic Over Pandemic Productivity"). The enforced downtime that populations all over the world have been subjected to has intensified the debate about labour and leisure as performed on social media to which the proliferation of "productivity posts" and their critique may attest.

The genre of reaction videos on YouTube already straddles this uneasy line between labour and leisure. The creation of a reaction video revolves around the act of filming oneself "reacting" to screen content which one had presumably not watched prior to that and more often than not the

reactor would appeal to the audience to “like, comment and subscribe” to their YouTube channel. McDaniel explains how the YouTube reaction video transforms “private music consumption into a public performance” (2) which would then ideally ensure continued “engagement” (2) from online viewers while the reactor may maintain an aura of authentic enjoyment, indifference or dislike of the screen content independent of what the viewers may desire. In this context music video reactions give us a way of asking and perhaps answering some of the questions regarding how listening to music may be performed visually and experienced recreationally to demonstrate the trope of work as play, i.e., labour that “doesn’t appear to be labour at all” (Warren-Crow 1115) during a time when people have become most concerned with projecting the appearance of being gainfully occupied.

Aside from thus making one’s employability visible, social media long used as a platform for virtual socialisation, witnessed an appreciable increase of online interactions in the absence and fear of physical interactions during the pandemic. Jarzyna in her paper titled “Parasocial Interaction, the COVID-19 Quarantine, and Digital Age Media” observes that virtual interactions especially between fans and celebrities or artists could fulfill people’s social needs in times of reduced real-world communication in the wake of a pandemic since there would already be an established emotional attachment felt towards these public figures (13-14). She also observes that these parasocial engagements previously one-sided, have now become less unequal in terms of emotional investment due to the popularisation of various social media platforms specifically designed to let artists interact directly with their fans in real time (Jarzyna 5). These parasocial interactions

had provided mental health benefits for people during the pandemic by providing a sense of “belonging ... and rais(ing) self-esteem” (Jarzyna 19) when they were deprived of real-world relationships though Jarzyna points out that parasocialisation cannot be regarded as a complete substitute for real world interaction (Jarzyna 18).

Fan Engagement with BTS during the Pandemic

The South Korean pop industry (henceforth abbreviated as K-pop) has long been virtuosic users of the new age social media platforms like YouTube, Instagram, Twitter, vlive etc. Xiong argues that K-pop stars create and enhance fan base loyalty by frequently publishing online content and by making themselves more accessible to fans over the internet (Xiong 3). Moreover, according to Xiong, fan engagement is encouraged and maintained by the K-pop management companies through the strategic uploads of dance practice videos, variety show appearances, various promotional materials etc. (Xiong 34) and therefore the parasocial interaction between the K-pop artist and the average fan maybe regarded as being already more affective than the unequal relationship that a person would have had with public figures before the industry-approved use of interactive social media as a public relations strategy. Thus here thrives the conceit of the celebrity personality authentically connecting with their fans without the oversight of the media house.

Although Xiong’s conclusions are drawn based on the K-pop fandom experience in North America, the importance of virtual interaction between fan and K-pop celebrity resonates in the non-Western context with equal if not greater intensity. Given the massive cancellations of concerts, fan-meets, promotional activities etc. in the wake of the

pandemic, the stakes of maintaining fan engagement have increased significantly for the K-pop industry.

Bangtan Sonyeondan or BTS is a seven member K-pop boy band who have released four full length albums as of 2020 since their debut in 2013 ("BTS Discography"). Their music has garnered critical acclaim and popularity especially in the international market. In June 2019 the band became the first K-pop act to sell out their two-day concert at Wembley stadium in United Kingdom, the site of the famous Live Aid concert of 1985 (Chakraborty "10 Biggest K-pop Moments in 2019"). While discussing the intense cultural impact of BTS headlining Wembley stadium as Korean-speaking artists (DKDKTV 00:16:11-00:26:10), David and Danny Kim, who report on K-pop news on their YouTube channel DKDKTV, speculate about the future of BTS concerts echoing not only the concerns of the fandom but also of the music industry at large since the band had tried out concert-livestreaming technology and had gained positive market response from paying fans (DKDKTV 00:19:21-00:20:48).

In 2020, BTS was poised to launch their highly anticipated *Map of the Soul* world tour which however had to be cancelled due to the COVID crisis. They also postponed various in-person promotional activities due to quarantine restrictions. Amidst this unprecedented situation when real-world interaction with fans at a large scale became impossible, BigHit, the band's management company assured fans that they would "create new ways for their artists to engage with their fans and respond to the 'New Normal'" ("BigHit Decides to Reschedule"). To ensure continued fan interest the band released a lot of web content about their quarantine lifestyle that documented the band members' doing chores, making art and craft projects, trying and failing to brew

labour-intensive beverages and making silly TikTok videos of themselves (Fandoms Unite 00:00:00-00:06:56). A YouTube search titled "BTS during quarantine" provides numerous examples of user-generated content about the band ranging from memes, fan-made compilation videos to reaction videos that may attest to BTS's success in inspiring fan engagement.

Among such content the reaction video may be seen as an interesting genre of user-generated content that is predicated on the trope of recording the "genuine first time" reactions of people watching screen media whose enjoyment or lack thereof reinforces the popular narrative about the content itself. Good reaction video etiquette presumes that the reactor would reveal if they had watched the particular piece of screen media before as the filmed primary experience of such would arguably carry a greater cultural capital within the reaction video community than when it is a repeat viewing. Reaction videos thus posit powerful affective response to media as their *raison d'être*. This particular genre of media according to McDaniel, runs counter to the hegemonic, Western, masculinist analytic method that privileges emotional distance and intellectual detachment when it comes to music appreciation (McDaniel 7).

This particular kind of unorthodox critique of media lays bare the ways in which alternative knowledge-production takes place within the bounds of fandom that lies outside the engines of traditional critique (Jenkins 16-18). We may turn to the YouTube channel B&M Reacts' reaction video to a fan-made compilation video of BTS's quarantine adventures to illustrate this point. YouTube reactors Brenton and Mirlanda from the aforementioned channel on their first watch of said video were confused about why the members

of the band were deliberately engaging in seemingly childish, unmarketable activities that Brenton thought would only be tiring unlike Mirlanda; she had to explain that those “pointless” cooking and craft projects were supposed to be fun not chores (00:07:38-00:07:49). Their wonder at the prospect of famously hardworking pop artists spending their time essentially doing nothing “productive” and then expressing how they would have liked to quarantine with the BTS members since they make it seem fun, demonstrates high level of affective “identification” (Jarzyna 8) that the reactors feel for the artists. The very act of play as performed by the BTS members in the quarantine videos demonstrates how leisure maybe commodified to fuel their profitable celebrity status while maintaining an aura of grounded relatability. This particular strategic aesthetic is also evident in “Life Goes On”- BTS’s music video released during the pandemic which provides an interesting case study of how an official release during such extraordinary times may be seen as embodying leisure as labour while also being a fruit of profitable labour.

Fan Labour in Reaction Video of BTS’ “Life Goes On” Music Video

During their reaction to “Life Goes On” on their YouTube channel MyCupOfTv, the reactors- Jenny, JD and Erin appear excited about reacting to a new BTS video together after a long hiatus due to lockdown (00:00:40-00:00:50). JD, the veteran fan amongst the three women who generally guides the others’ viewing choices regarding BTS, introduces the song as a sort of quarantine log of the band members’ lives (00:12:16-00:12:19) and given this is not her first time watching the video, comments on and relates the most readily to BTS’s experiences of self-isolation and desultory habits during (00:13:06-00:13:10).

At various points during the reaction, JD interjects with extra-diegetic information about the music video that not only signals her enjoyment of learning the same but also of sharing so with her friends- revealing how the seemingly unprofitable work of seeking out extraneous facts about a private interest may disseminate baseline knowledge of it to the casual viewer and perhaps engage their interest. McDaniel highlights this circuit of free, recreational fan labour that fuels the visibility of the primary content while the popularity of the latter feeds into the growth of fan created content like reaction videos (McDaniel 3).

Although such labours of love may be exploited by media houses as free marketing and even the fans’ personal digital data used without authorization (Wang 48-49), McDaniel holds a less bleak view of fans’ agency with relation to data mining as the very act of making reaction videos seems to imply that access to user information generated while filming private experiences is being given away voluntarily (McDaniel 5).

The self-awareness attributed to the reactor community may explain why reactors are attempting to benefit from their own lack of privacy on the internet by posting their videos on Patreon – a site which allows access to exclusive user-generated content for the paying “patron”, thus circumventing YouTube’s strict copyright policies. The women of MyCupOfTv use a familiar strategy to guide viewers to their Patreon account where they promise to post reactions to the other versions of the “Life Goes On” music video that BTS had released (00:20:20-00:20:25), which in itself is a shameless business move that capitalises again and again on what is essentially the same content. Despite the overt appreciation of the song, the reactors are not unaware of its status as a

commodity. Erin remarks in the course of the reaction video whether she should now look forward to a new line of pajamas given the prominence of the featured outfit in "Life Goes On" (00:14:29-00:14:32).

Such observations however do not detract from the visible enjoyment that the reactors display and the intensity of the connection they feel for the song. Jenny describes her experience of listening to it in visceral terms. For her the music had been like an embrace from the BTS members themselves that seemed to alleviate the heightened touch-starved loneliness that had become the norm since the pandemic (00:18:02-00:18:10). Interestingly, Jarzyna had speculated about the use of haptic technology in recreating human touch artificially in the absence of real-world interaction in her essay "Parasocial Interaction, the COVID-19 Quarantine, and Digital Age Media" (Jarzyna 13). Here we see that the very act of listening to music through a technological medium albeit in the real-world presence of friends and virtual presence of online viewers seems to create a sense of haptic interaction with the artists onscreen.

Jenny later observes that unlike other artists who had postponed music releases because of the prohibition on concerts, BTS had gone ahead with their music release to help their fans even when profits would be minimal (00:18:34-00:18:47). The reactors agree that this disregard of standard practice is evidence of the band laying more emphasis on creating music than generating profit- that they are "not fake" or doing it to be "popular" but to comfort listeners in an unprecedented time of need (00:17:51-00:17:58). Moreover, this observation seems to tie in the band's perceived intentions behind their pandemic music release with the conceit of the reaction video. The band like the reaction video capitalises on the

truth of one's experience which Warren-Crow defines as "authenticity" that dictates the media's "shareable" property (Warren-Crow 1113).

Media studies have long theorised fan labour as disadvantageously gendered that mobilises "girl'd skills" (Warren-Crow 1115) in its confrontation with capitalism in the sense that such labour would be targeted or considered trivial since it is performed outside the bounds of legitimacy and would be vulnerable to copyright claims or exploited for marketing campaigns (Wang 48-49, Warren-Crow 1115). However, fans through the medium of the reaction video reconstruct and appropriate their affective engagement with media as a commodity and by extension their leisure before large corporations can. Though the art of reacting to media that inspires continued engagement may be seen as a marketable "skill" that McDaniel terms "reactivity" (McDaniel 2) - the very practice of it being enjoyable and entertaining makes this fannish activity both recreational and profitable. During the pandemic when the myth of the gig economy is being tested to its limits a reaction channel would probably not generate enough revenue to comfortably supplement a primary income like most side hustles but it does inject a much-needed sense of fun into a flat, pointlessly competitive world.

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The Dark Future of Digital World

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Abstract

Over the last decade or so, the use of electronic products in our daily life has been extensive, especially in urban lifestyle. From morning to night, every day we use a variety of electronic appliances and tools. In the COVID-19 pandemic situation, the world has witnessed a major transformation almost in every aspect of human life. From education to business, almost every sector has been affected. To battle out this situation to some extent, we ought to take shelter to the digital world. The use of different electronic products has been increased drastically. Undoubtedly, this action brings many benefits. Simultaneously, it generates unwanted crisis in the world of electronics. In this article we will walk through this uncertain condition and probable way outs.

Introduction

Besides the concrete jungle, we also have been living in the world of electronics. In everyday life we are accustomed with a wide range of electrical/electronic products; from mobile phones to computers, smart watches, washing machines, microwave ovens, electronic vehicles etc. COVID-19 pandemic situation has a terrible effect on human life throughout the world. As an adjustment, companies from different sectors allow their employees to continue their work from home as much as possible, students of schools & colleges have no other choice, but to attend classes via online mode. Consequently, the demand of different electronic devices (e.g.: Laptops, desktops, smart phones, tablets, web

camera, microphone etc.) has been sky touching. Due to the exponential rise in the “work-from home”, “study-from-home” scenarios, manufacturers of these electronic products have faced a huge challenge.

All these electronic products have one or more “chips” (ICs) as its core component. And within this, “semiconductor” is the primary component in building all these chips.

Problem & Effect

In recent times there has been a shortage in the production of semiconductor, worldwide. Consequently it has an immediate effect in several industries, especially who has largely been dependent on semiconductor supply. Industries

like chip fabrication, car manufacturing, defense industries and several other sectors have been affected badly. Companies are forced to shut down their production units and facing hefty loss. Needless to mention, this has a ripple effect throughout the world [1], [2]. Tech giants from different fields expressed their concern over this crisis and bit uncertain about the coming years. For instance [3], CEO of world renowned chip fabrication company Intel, Pat Gelsinger predicted that situations won't get better before 2023. Leaders of different countries have expressed their concern over this issue and finding ways to handle it. In recent times, The WHITE HOUSE has also issued statements regarding this crisis situation.

This global shortage of semiconductor has a great impact in the price of different products where semiconductor has been used as an inevitable part. Prices of different commodities are getting high, where semiconductor has been used [5], [6].

Probable Solution

Scientists, industry experts are trying to find out solutions. Besides that, we may take the following measurements to handle this situation in a better manner before it hit us badly:

1. Have regulatory actions and prioritize the usage of products manufacturing that contain semiconductors.
2. Well maintenance of existing electronic products in a better manner, so as to increase their longevity.
3. Proper distribution and utilization of the existing stock of semiconductors.
4. Reuse of semiconductors (if possible) from existing electronic waste.

5. Global research for alternatives of semiconductor, if there is any.

Conclusion

The sudden crisis of semiconductor throughout the world has undoubtedly posed a severe problem in the future of electronic world. But situation like this must have widen our eyes to the fact that, we have to be very much aware of exploring the natural resources. Planet earth has limited resources to fulfill the need and greed of human civilization. Similar to the crisis of drinking water and other valuable resources in different parts of the world, we need to learn a lesson out of it. Situations like this are no short of an alarm before the mass extinction of human civilization.

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Basis of CT Scan Imaging in Covid-19 Infection Detection

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Computed tomography (CT) scanners were introduced in 1970s and enabled doctors to see the 3D anatomy within the body without the need for an open surgery. CT scanners acquire multiple X-ray images by scanning around the anatomical area through 360° and these are processed to give a 3D image. The significant advances in CT scanner technology have decreased the scanning time from over 4 minutes to less than a minute per patient. The acquisition time per CT image has reduced from 135 seconds per image in 1972 to greater than 200 images per second today. The reduced scan time, increased X-ray tube power and advanced reconstruction algorithm have led to enormous growth in the use of CT scanners for clinical use. This paper discusses the basic principles involved in the design of a CT scanner, image acquisition using a CT scanner and reconstruction of the 3D image from the raw data.

Basic design

A CT scanner consists of a moving gantry inside a large housing and a patient table, as shown in figure 1. The gantry contains the X-ray tube and detector arrays and is capable of 360° rotation. The detector arrays are arranged in an arc centred at the X-ray tube. The X-ray tube and detectors

are attached rigidly to the rotating gantry and rotate in unison. This design is called the “rotate-rotate” geometry. The z-axis of the CT scanner is perpendicular to the plane of rotation of the gantry.



Figure 1: A CT Scanner

Modern CT scanners use slip ring for electrical connection between the gantry and the stationary frame. This eliminates the use of electrical cables connecting the stationary frame to the moving gantry, as in earlier scanners. Slip rings consist of concentric metal bands that are electrically connected to the gantry through a series of gliding contacts.

The patient table can be moved up and down and translated along the z-axis into the bore of the scanner. In order to perform the CT scan of a patient, the gantry is

lowered and the patient table is raised and translated to insert the patient into the bore of the scanner. The patient is centred in the bore and the cranial caudal axis of the patient kept parallel to the z-axis of the CT scanner. Then the CT scanning is carried out by the imaging hardware as it rotates through 360° inside the gantry cover and at the same time the patient and the table translate through the bore of the gantry. The scanner field of view (FOV) over the length of the patient is cylindrical in shape, having a maximum diameter of 50 to 70 cm for different CT scanners.

X-ray beam and detection system

Modern CT scanners use an X-ray beam having narrow cone beam geometry, as shown in figure 2. The fan angle is approximately 60° and the full cone angle is about 2.4°. The X-ray tube is mounted on the gantry with the plane of the anode disk parallel to the plane of gantry rotation and the anode-cathode axis parallel to the z-axis. This X-ray tube orientation provides the 60° fan angle and the coverage is limited in the direction parallel to the z-axis.

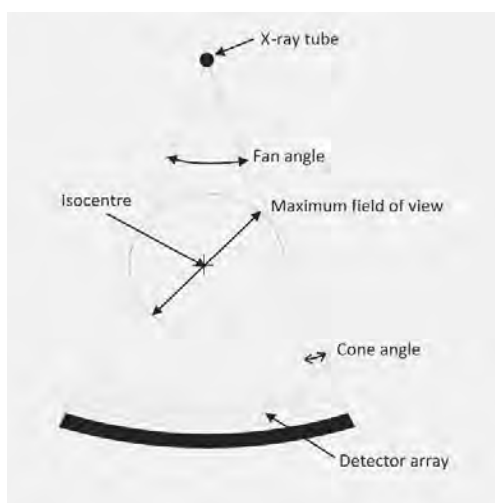


Figure 2: X-ray and detector array

The isocentre is the centre of rotation of the CT gantry. The maximum field of view depends on the fan angle and the distance between source and isocentre. The magnification factor from the isocentre to the detectors is, $M = \frac{B}{A}$ where A is the distance between source and isocentre and B is the distance between the source and detector. Each detector measurement can be considered as a ray and it gives a line integral of the attenuation between the X-ray source and the detector. A collection of rays is called a projection and it refers to the data collected when X-ray is incident at a certain angle on the object.

The maximum CT gantry rotation speed is 5 rotations per second. Most CT scanners use an X-ray tube that provides continuous output (not pulsed). The detector array sampling time is typically 0.2 to 0.5 ms, which means that about 1000 to 3000 projections are acquired per 360° rotation for a rotation period of 0.5 s. So, the X-ray focal spot will move a certain distance (about 1 to 2 mm) during each projection while the patient remains stationary. This can lead to motion blurring and a loss of spatial resolution. Some manufacturers steer the electron beam between cathode and anode to move the focal spot in the opposite direction and thereby reduce the effect of the moving X-ray spot.

The power rating of a CT X-ray tube is about 5 to 7 MJ whereas the power rating of an X-ray tube in standard radiology is about 0.3 to 0.5 MJ. The tube voltages in CT scanners range from 80 to 140 kV. This provides X-ray of effective energy 40 to 60 keV. In soft tissue, Compton scattering predominates whereas in bone and iodine, photoelectric interactions are more likely to occur. The values of linear attenuation coefficient (μ) are more for bone and iodine as compared to soft tissue, water and adipose.

All CT scanners use indirect (scintillating) solid-state detectors where the scintillation crystals (such as $\text{Gd}_2\text{O}_2\text{S}$) are sintered and coupled to photodiodes that are layered on substrate electronics. A multidetector array may contain 64×64 detector elements separated by optical filler to reduce optical cross talk between detectors. The detector module sits on a stack of electronic modules, which provide power to the detector array, receive electronic signals from each photodiode, amplify and convert the signals to digital data.

The CT slice thickness is the width of the detector array along the z-axis of the scanner. In a single array CT scanner, the slice thickness can be adjusted by changing the X-ray beam width. In a multidetector CT (MDCT) scanner, the slice thickness and X-ray beam width are not equal. If the minimum CT slice thickness quoted on the scanner is T mm (measured at isocentre), the actual detector width must be $M \times T$ mm, where $M = \frac{B}{A}$ is the magnification factor. If the number of detectors is n , then the collimated X-ray beam width = nT . For example, one manufacturer's CT scanner has $n = 64$ and $T = 0.625$ mm, then the collimated X-ray beam width is $nT = 40$ mm. So, 20 cm section of abdomen can be imaged in $\frac{200}{40} = 5$ scans using contiguous imaging, and the total number of 0.625 mm thick CT images taken = $5 \times 64 = 320$. The data from each detector array is recorded during a CT scan and the image can be reconstructed using a different CT slice thickness. In the previous example with $n = 64$ and $T = 0.625$ mm, the system can be programmed to reconstruct 64×0.625 mm slices or 32×1.25 mm or 16×2.5 mm, as per the combinations available on the scanner. Regarding slice thickness, there is a trade-off in terms of the radiation dose to the patient, the CT image noise and the z-axis resolution. Thin-section CT images have

higher z-axis resolution but the images have more noise because thin images require less X-ray photon. The noise can be reduced at the expense of increasing the radiation dose to the patient.

CT Acquisition Modes

When the patient is moved into the gantry bore, the technician performs a preliminary scan called the CT radiograph. During this scan, the X-ray tube and detector arrays remain stationary, and the patient is translated through the gantry. The CT technician uses the CT radiograph to setup the CT scan geometry by marking each end of the CT scan. In addition, the CT scan parameters are set, such as kV, mA, gantry rotation time(s), type of scan (helical or axial), direction of scan, pitch, detector configuration, reconstruction kernel(s) and so on.

During axial CT scanning, the gantry is rotated with a period of 0.5 s or more, the X-ray tube is activated to take 360° data, the X-ray tube is deactivated and the table is moved, and then the process is repeated until the entire anatomical area is covered. The table has to repeatedly start moving and stop, and this increases the acquisition time in axial CT. The X-ray tube forms a perfect circle around the patient. During axial scanning in MDCT systems, the table moves a distance equal to the width of the detector array at isocentre (nT), between each axial acquisition.

In helical (or spiral) scanning, the table moves at a constant speed while the gantry rotates around the patient and so the X-ray source forms a helix around the patient. The speed of the helical scan compensates for the motion of the table and reduces the patient motion blurring due to beating heart and intestinal movement. The pitch of the helical scan is defined as, $\text{pitch} = \frac{F_{\text{table}}}{nT}$, where F_{table} is the table feed distance per

360° rotation of the gantry and nT is the collimated beam width. For example, if the beam width (nT) is 40 mm, gantry rotation period is 0.5 s and the table is moved at 80 mm/s then the pitch is 1, which corresponds to contiguous axial CT. A pitch lower than 1 results in overscanning the patient and higher radiation dose, whereas a pitch greater than 1 means underscanning the patient and lower radiation dose. So, the radiation dose is inversely proportional to the pitch.

CT Image Reconstruction

The CT scanner can be calibrated by performing air scans and the measured data for a given CT scan are normalized using the air scans. The intensity measured at detector element j is, $I_j = g_j I_0 e^{-(\mu_1 t + \mu_2 t + \dots + \mu_n t)}$ where g_j is the gain of the detector element and I_0 is the incident intensity. During CT scan, the intensity measured at a reference detector (located outside the field of view of the patient) is, $I_r = g_r I_0$. The calibration air scans give the ratio of the gains between a detector j and the reference detector r , $\beta = \frac{g_r}{g_j}$. So, the projection measurement is, $P_j = \ln\left(\frac{I_r}{\beta I_j}\right) = t(\mu_1 + \mu_2 + \dots + \mu_n)$, which corresponds to sums of the linear attenuation coefficient through the patient along the path of the ray.

Once the X-ray absorption data have been converted into projection data sets, the CT image computation becomes a linear problem. This has been illustrated in figure 3 with the 3×3 grid of numbers, which corresponds to the “patient” of a CT scanner. Four projections A-D are shown, which are the linear sums of the voxel values that each ray intersects. The mathematical problem of reconstruction of the CT image is similar to the problem of calculating the nine values of the 3×3 grid from the projection data. In a CT scanner, the matrix is typically 512×512

and so the problem of reconstruction of the image becomes more difficult. The CT images were reconstructed using filtered backprojection technique for many decades until recent advances in algorithms and computing power, which have led to the use of iterative reconstruction algorithms for CT images. Iterative reconstruction technique uses a series of iterations to reconstruct the CT image, starting from a constant image or filtered backprojection image.

The three-dimensional CT scan data can be used to construct axial images (x, y) , coronal images (x, z) and sagittal images (y, z) . The grey scale values in CT images are called Hounsfield units (HUs). It is defined as, $HU(x, y, z) = \frac{1000(\mu(x, y, z) - \mu_w)}{\mu_w}$ where $\mu(x, y, z)$ is the average linear attenuation coefficient for a volume element (or voxel) of tissue in the patient at location (x, y, z) and μ_w is the linear attenuation coefficient of water. At all X-ray tube voltages, $HU = 0$ for water and $HU = -1000$ for air. For adipose tissues, $HU = -80$ to -30 and for most organ parenchyma, $HU = +30$ to $+220$. Tissues with iodinated contrast and bone have much higher HU values.

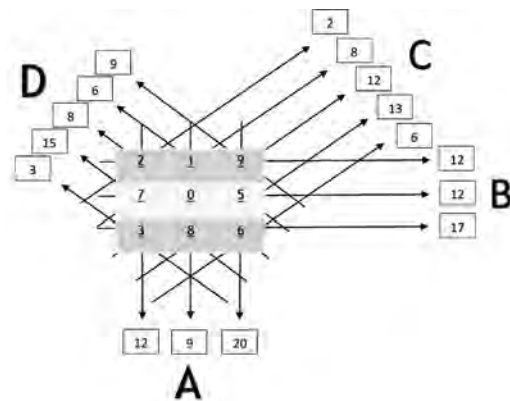


Figure 3: An object (3×3 grid) and its projections



Figure 4: CT Scan of lungs

Diagnosis of COVID-19 using CT scan

The majority of CT scans are performed on head, chest, abdomen or pelvis. They can be used to detect tumours and internal injury in the patient. The three-dimensional nature of CT scans provides more data than standard radiology in the form of high-resolution axial, coronal and sagittal images. These can be very helpful in the proper diagnosis of patients.

The outbreak of COVID-19 pandemic has led to the indiscriminate use of CT scan for diagnosis of the disease. Since CT scan is an imaging technique, the CT scan images can show abnormality for patients with

COVID-19, but similar images are obtained for people with other lung diseases as well. So, CT scan cannot be used to definitely determine if a patient has COVID-19 or not. In fact, many COVID-19 patients have normal chest CT scan images and it can lead to false negatives and incorrect diagnosis. Moreover, patients undergoing CT scan absorb significant amount of radiation dose and multiple CT scans over a short period of time can be harmful to patients. CT scans have been recommended by doctors for severe COVID-19 patients whose condition may be worsening. It might help doctors determine the level of support needed by the patient.

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From Images of Object to Object-in-Images: A Semiotic Appraisal of Covid-19 in Visual Culture

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Keywords: Covid-19, Sign, Object-in-Image

Scenario 1:

On the 28th of March 2020, the Chennai edition of the Times of India published a photo of a woman and a child on a two-wheeler being accosted by a policeman wearing a strange, almost grotesque helmet that was brownish red in colour with antler-like projections all over it. The shape distinctly resembled a single organism of the Sars-CoV-2, known worldwide by its more popular sobriquets such as Covid-19, Coronavirus or simply Corona, a pandemic raging through the world since January this year. The policeman in question was a certain Rajeesh Babu, an Inspector posted at the Villivakkam Police Station, who came up with this idea as part of an awareness campaign and received official endorsement.¹

Scenario 2:

On the 21st of March 2020, pictures of pakodas or fries resembling the same organism went viral on Social Media. The fries were a novel idea by some street vendor and was being sold somewhere in Eastern India.² The following month of April saw a reputed sweetshop chain in Kolkata, Hindustan Sweets, unveil a melange of delicacies resembling the Sars-CoV-2 organism. This went viral as well, drawing mixed responses from people, some of whom felt it was consumerist overkill.³

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- 1 Prathap, A. & Aditi, R. "Covid-19 in Chennai: Don't venture out in Villivakkam area, cop wearing disgusting corona helmet may come with you!" *The Times of India (Chennai edition)*, Saturday, 28 March, 2020
 - 2 Ahuja, Aditi. "Coronavirus: This picture of Corona Pakoda goes viral on Social Media. Seen it yet?" <https://food.ndtv.com/news/coronavirus-this-picture-of-corona-pakoda-goes-viral-on-social-media-seen-it-yet-2200631>. Accessed 25 April, 2020
 - 3 Das, Shreya. "A Kolkata sweet shop creates corona-misti to fight fear against the pandemic", <https://indianexpress.com/article/cities/kolkata/kolkata-sweet-shop-creates-corona-misti-to-fight-fear-against-the-pandemic-6350383/>. Accessed 7 April, 2020

The Object:

Let us begin by stating something obvious: at the moment, human civilization is grappling with a crisis that has drastically altered our quotidian and forced us to embrace hitherto unforeseen changes, manifest in our social responses. In itself, this is not something novel or unprecedented; virulent outbreaks such as those of Bubonic Plague, Cholera or Spanish Influenza in recorded history bear testimony to that.⁴ But what exactly do we mean by 'social responses'? Some are overt, most notably a set of social behaviour which is being defined as the "new normal"; these include an assortment of social rejig, some of which are conspicuous, especially those that are adopted and implemented by the state, e.g. social distancing, sanitary measures and policies of public health. Another profound response is widespread panic which is evident in the hankering for masks and sanitizers (even when most people do not understand their utility properly), and the stigmatization of an afflicted person or a family. Not surprisingly, a lot has already been written, with no diminished propensity whatsoever, on the challenges Covid-19 poses towards public health as well as the

'changes' that it might be expected to bring in our social and economic behaviour. To restrict the definition of 'social responses' to these few characteristics however, would be gross reductionism, and yet that is how it has panned out with regard to Covid-19 so far. Almost every other article is expected to touch upon the feeling of consternation and uncertainty that looms large on our society and the landslide changes can be foreseen.

Apakoda or a platter full of sweets all shaped like a singular organism of Sars-CoV-2 doesn't seem very analogous to such a discourse at all, for how can we explain entrepreneurs selling foods that look so hideous and invoke a reality so macabre? This is surprising because academic sociology has thought deeply about the cultural roots of social functioning since the times of Emile Durkheim.⁵ Post-structural developments in cultural theories have increasingly hinted at a coded system of communication between individuals and social agents that form the fulcrum of all social institutions. To put it otherwise, cultures are essentially complex webs of communication that are regulated by codes which determine how signals are to be conveyed and received during communication. In semiotics, these signals are defined as 'signs'; every mode of communication bears a plethora of signs which include the entire human lexicon as well as graphic or even sonic representations.⁶ So, in order to understand the functioning of social institutions, one must delve deeper and make a nuanced study of them. In 1992, the American

- 4 The social history of epidemics has given birth to a vast body of literature over the years; for a brief and comprehensive study, see:
Pati, Biswamoy. & Mark Harrison. *The Social History of Health and Medicine in Colonial India*, Routledge, 2009;
Bashford, Allison. & Claire Hooker. *Contagion: Historical and Cultural Studies*, Routledge, 2001;
Snowden, Frank M., *Epidemics and Society: From the Black Death to the Present*, Yale University Press, 2019
Baldwin, Peter. *Contagion and the State in Europe, 1830-1930*, Cambridge University Press, 2004;
Porter, Roy. *Disease, Medicine & Society in England, 1550-1860*, Cambridge University Press, 1995;

- 5 Durkheim, Emile. *The Elementary forms of the Religious Life*, Oxford University Press, 2001, Originally Published in 1912;

See also: Allan, Kenneth. *Explorations in Classical Sociological Theory*, Pine Forge Press, 2005, pp. 101-138

- 6 Hutton, Frankie. *Rose Lore: Essays in Cultural History and Semiotics*, Lexington Books, 2008
See also: Chandler, Daniel. *Semiotics: The Basics*. Routledge, 2002;

sociologist Charles Rosenberg situated disease and epidemics within a broader cultural scope; he argued that epidemics are ultimately a social phenomenon and they play a crucial role in informing the codes of institutional functioning.⁷ In Indian context, Guy Attewell, Kavita Sivaramakrishnan and Projit Bihari Mukharji have shown how epidemics of Plague and Cholera during the colonial rule altered the existing discourse of medical practices by introducing a 'modern' professionalism within the doctor-patient relationship.⁸ Mukharji in particular, undertook an exhaustive study of vernacular medical texts published during the close of the nineteenth century to reveal how modernity was realized through special parlance and how existing words were loaded with reformed meanings. The very terminology 'Covid-19' (or "coronavirus" for that matter) and the spherical image with projections are potent signs themselves; if we have to understand why someone would wear a helmet resembling a Covid-19 organism, we must begin by asking what these signs mean and how they have reshaped our existing codes of communication.

It is quite evident that knowledge on Covid-19, however specialized, is not esoteric anymore, nor is it strictly what we can call 'scientific', but has become akin to what we perceive as 'popular

knowledge'; what has been conceived inside a laboratory through specialized function and operation is constantly being reproduced and reshaped within the ambit of a popular space.⁹ Six months of intense international campaigning, unprecedented health measures on national scale, and constant bio-medical deliberations have turned 'Coronavirus' into an overwhelming presence on both mind and matter. Endless streams of health directives and ceaseless tracking of the disease by mainstream media make up an enormous pool of information that is in perpetual circulation through the various communication networks across globe. The repeated transmission of data has augmented its distortion and has created an inflated concoction of facts, realities and myths. This swelling nebula of clustered information has engulfed our television sets, our newspapers and even our social media platforms. Constant exposure breeds familiarity, which in turn informs a growing repository of popular knowledge around the subject, even if much of the discourse revolves around idealist notions and not on scientific rationality.

The Image:

Such re-production of knowledge ascribes a peculiar universalism to Sars-CoV-2. Although a lay person has no means to witness the shape of the organism under a microscope, one seems to be familiar with

7 Rosenberg, Charles E. *Explaining Epidemics and other studies in the History of Medicine*, Cambridge University Press, 1992, pp. 109-121

8 Attewell, Guy. *Refiguring Unani Tibb: Plural Healing in Late Colonial India*, Orient Longman, 2007;
Sivaramakrishnan, Kavita. *Old Potions, New Bottles: Recasting Indigenous Medicine in Colonial Punjab 185-1945*, Orient Blackswan, 2006;
Mukharji, Projit Bihari. *Nationalizing the Body: The Medical Market, Print and Daktari Medicine*, Anthem Press, 2009

9 **For the discourses on Power and Knowledge**, see Foucault, Michel. *Archaeology of Knowledge*, Routledge 2002, Originally published in 1969; **see also:** Foucault, Michel. *Power/Knowledge: Selected Interviews other Writings 1972-1977*, ed. by Colin Gordon, translated by Colin Gordon, Leo Marshall, John Mepham & Kate Soper, Pantheon Books, 1980

For the discourse on scientific knowledge, **see:** Latour, Bruno. & Steve Woolgar. *Laboratory Life: The Construction of Scientific Facts*, Sage Publications, 1979

how it actually looks like and that too with a certain conviction. This has been the result of a sustained exhibition of visual imagery whereby these graphics could be transformed into a heuristic tool. Used as a logo on news headlines and awareness notices, this image has been widely circulated in various forms, some of them being simple sketches and some digitally designed 3D figures, the only common factor being the spherical shape with antler like projections growing out of them. There has also been a proliferation of comic strips and cartoons which has used this representation with a regularity (special mention must be made of the popular 'meme culture' in social media platforms which has revived the culture of graphic caricature somewhat). Nevertheless, there is no linear connection between graphic representations and tangible objects such as a helmet or a piece of sweet. A similar argument is valid for the objects in relation to one another; the only aspect of homogeneity between them is their specific shape, which seems to invoke an objective reality altogether quite distinct from either of these.

Ferdinand de Saussure, widely considered the father of modern semiotics, argued that signs refer not to an object but to human perception about that object, something that both Saussure and Umberto Eco would explain as sort of psychological construct. In Saussurean semiology, tangible objects are never a *sine qua non*; in fact, Saussure insisted that signs are abstract and the relation between the *signifier* and *signified* is but arbitrary.¹⁰ Charles Sanders Peirce turned Saussure's dyadic model

into a triadic one by acknowledging the object (Peirce's *referent*) as distinct from the thought about that object (Peirce's *interpretante*); he argued that every reference (Peirce's *representamen*), instead of hinting at an objective reality, reveals a specific *interpretante* of that reality. The attempt to arrive at the *referent* via the *interpretante* is therefore, never sequential but lateral, as it would only culminate into the cognition of another *interpretante*.¹¹ Peirce conceived this cognitive gap between an *interpretante* and its *referent* as unbridgeable; in other words, a sign can never refer directly to an object but only to the *perceived reality* of that object. To put it in context, the image of a singular organism of Sars-CoV-2 does not refer to the objective reality of the virus but *reproduces* it as an object-in-image.

The Object-in-Image:

Saussure had conceived signs in abstract relationality to an infinite number of other signs within a web of semiotic network, the essence of which was a natural difference between the signs. This followed from an arbitrary function of the *signifier* on its *signified*; Saussure argued that the relationship between the two can be realized as conventional and customary but never as intrinsic. To him, this meant a multiplicity of interpretation that could be drawn from each symbolic function, hinting at multiple other signs that existed on a similar horizontal plane. However, there have been

10 Saussure, Ferdinand De. *Course in General Linguistics*, translated from French by Wade Baskin, Philosophical Library, 1959, Originally Published in 1916;
See also: Eco, Umberto. *The Name of the Rose*, Houghton Mifflin Harcourt, 1983

11 **See** Peirce, Charles Sanders. "On a New List of Categories", *The Essential Peirce: Selected Philosophical Writings*, Vol. 1 (1867-1893), ed. by Nathan Houser & Christian Kloesel, Indiana University Press, 1992, pp. 1-10
Peirce, Charles Sanders, "What is a Sign", *The Essential Peirce*, Vol. 2 (1893-1913), Indiana University Press, 1998, pp. 4-10
See also: Peirce, Charles Sanders. "Excerpts from Letters to Lady Welby", *The Essential Peirce: Vol. 2*, pp. 477-490

significant shifts in semiotic thought over the latter half of the Twentieth Century, with structuralism in linguistics becoming passé. In place of a Saussurean relationality between signs, Peirce introduced the concept of **relativity**; he argued that the arbitrariness of a sign is never absolute but only relative to the 'natural' symbolism of the same sign. Based on this arbitrary/natural relativity, Peirce postulated three possible modalities on which a sign could function: *Symbolic*, *Iconic* and *Indexical*; while in the Symbolic mode the sign vehicles are heavily arbitrary or conventional in relation to one another, the Indexical mode bears a direct or causal connection between the *representamen* and the *interpretante*. The Iconic mode sees these binaries in balance, where the natural causation between the *representamen* and the *interpretante* is practically established rather than direct. The point to note here is that these modes are not conceived as separate structures but as orders in a hierarchy, which means that signs usually function through all the three orders while displaying a certain modality as the dominant one. This in turn would mean that the function between the sign vehicles could also change or shift vertically along the hierarchy; in fact, Peirce expected signs to shift through modalities. In simpler words, an Indexical sign, with time and proper exposure to a certain culture, can acquire a relative arbitrariness which would transform it into a symbolic sign.

In context to our object-in-image, this shift is already palpable; what was introduced as a sign bearing direct physical resemblance to a certain object, has acquired an arbitrariness that has triggered a change in modalities. To substantiate this theoretical premise with empirical evidence exceeds the limits of this scope, simply because such an endeavour can never be quite sumptuous. The extent to which this object-in-image has permeated

popular culture must be understood from its growing relativity and how it is being reshaped through such engagements; the possibilities are infinite and simply endless. For our purpose in this article, only a few instances of such engagements have been chosen. This article, though it is hardly exhaustive and raises more questions than it answers, does not claim to navigate the entire discourse but only traces the contours of it.

Allusions have already been made to the feeling of sheer dread and paranoia that surrounds Covid-19; it is by making use of this quotient of fear that Rajeesh babu hoped to persuade the woman and the child to wear masks. More than simply spreading awareness, the helmet has a visual impact; it encodes the risk of contagion in terms of direct physical threat. Since January 2020, there has been repeated use of this motif in all sorts of visual communication, especially in cartoons and comic strips, some of them being independent creations circulated in social media platforms. A common theme in them has been the depiction of the Covid-19 virus as a menacing monster threatening the civilization; in some, Earth itself has been transformed into the Covid-19 organism. Others showed these monsters being challenged by policemen and medical professionals. Curiously enough, the challenges offered to Covid-19 are depicted even in sporting imagery; a sketch by the famous cartoonist Satish Acharya shows the frontline workers in uniform engaged in a game of *kabaddi* with a demonized version of the Covid-19 virus, trying to peg it back from the touchline beyond which some helpless citizens look on with anxiety.¹² Another cartoon by the artist Manjul doing

12 URL: <https://www.oneindia.com/photos/daily-cartoons-57493.html?share=784983&share-url=1>

the rounds in Twitter shows the same group of people, joined by the Prime Minister himself, forming a human chain around a hostile version of the same demonized organism.¹³ The point to note here is that *kabaddi* as a sport has traditionally been seen as an intense affair with a no-holds-barred attitude; the graphic recreation of a game of *kabaddi* is actually a sign which communicates this specific meaning to the viewer. Forming a symbiotic relationality with this particular sign shows how that symbolism of the object-in-image becomes entwined with more traditional signs.

As Covid-19 cases started spiking across India, the pandemic acquired a new significance; it is gradually being viewed not merely as a medical emergency anymore but as an apocalyptic phenomenon. The second wave of cartoons and sketches started portraying the organism as less of a monster and more of a nemesis. Consider a widely circulated cartoon that was doing the rounds during March this year: planet Earth is personified as a hapless entity thanking the Coronavirus gleefully, even as the belligerent virus holds a human at gunpoint and asks him to apologize for the atrocities wrought on nature. This particular environmental and ecological rhetoric has taken over as more and more reports started claiming that the ensuing lockdown across the world has restored the planet's health by a considerable margin. This is interesting because the perceived level of threat has acquired the symbolism of a natural/divine repercussion and even a practical manifestation of the Judgement Day. Not surprisingly, social media reacted to this type of art with a sense of resigned despair. It must be noted at

this point that such damning judgements on human civilization is nothing new in itself; the post-world war era has seen steep rise in environmental activists, anti-capitalists and other postcolonial strains of radical thought that have denounced the sustained exploitation of nature for material gains. Such ideas have tended to consider all natural calamities as natural retribution; indeed, violent storms or mega tsunamis themselves have become a sign for such cultural developments. Covid-19, as an object-in-image, has come to form a symbiotic relationality with these particular signs in our culture.

The general panic and feeling of doom reached its peak during the end of April this year; since then, there has been a steady decline in the hype surrounding Covid-19 which is being seen more as a practical problem rather than a providential curse. This is evident in the fact that the object-in-image was gradually drawn into relationality with more mundane form of thought or signs representing such thoughts. One of the foremost of these is of course political consciousness; it should be noted that the term 'political consciousness' has a wider connotation and must not be confused with 'political criticism' which is only a single aspect of the former. To begin with, the Covid-19 situation is not only an administrative crisis but also mounts a stiff challenge to global policy making authorities; a long period of complete lockdown has forced most countries to rethink their economic policies. India is no exception to this; there has been major overhaul in labour laws, health policies and budget allocations in general as a response to the socio-economic slowdown. As a post-colonial nation, India has a strong populist tendency which keeps the activities of the state under scanner and levels strong criticism against any

13 URL: <https://theprint.in/last-laughs/lakshman-rekha-for-corona-ravan-and-playing-kabaddi-with-covid-19/387916/>

measure considered 'anti-poor'. In a way then, political criticism is part of our 'culture', where it finds manifestation through caricatures and satirical writings; Covid-19 has become enmeshed with these existing signs of criticism through the use of its object-in-image. Consider a cartoon by Satish Acharya which shows a scared man running away from a giant version of the Covid-19 virus, visible only as a large shadow on a wall behind the man, even as another man around the corner lies in wait for him with a cosh in his hand. The face of the second man is invisible but his attire provides an inkling as to his identity, purportedly a leading statesman of the country; the cosh he holds resembles a Covid-19 organism as well and it has a tag with the words "suspension of labour laws" written on it.¹⁴ The implication here is quite loud indeed; even as the common folk reel under the impact of the pandemic, the government is hitting them harder with economic policies. The shape of the cosh is suggestive as it shows how the Covid-19 object-in-image has acquired almost a universal code for anything that attacks livelihood of the poor people.

As asserted earlier, political criticism presupposes political consciousness; the latter is a socio-cultural space where different forces act on each other to determine the locus of power. Covid-19, as an object-in-image, has permeated this space and has come to share a symbiotic relation with some of its most powerful signs. On the 26th of March, a cartoon published in a leading daily newspaper portrayed the planet as a helpless victim, bound and gagged, at the mercy of a gun-wielding anthropomorphic character that sported a Covid-19 organism in place of a head; the character's attire was suggestive,

it wore a robe resembling a *thawb* which is a common male garment worn traditionally in some of the Middle Eastern countries.¹⁵ The fact that the whole imagery drew a strong similarity between Covid-19 pandemic and global *Islamic* terrorism was not lost on the populace at large; subsequently, the newspaper faced serious flak over the art which was considered both offensive and provocative. Despite the globally accepted standards of terrorism, which absolves any particular religion or community from being defined as terrorists, the robe (usually depicted with a hood) has gradually become one of the strongest signs of a purported terrorist identity in popular culture, while Muslims have always maintained that such an interpretation is discriminatory towards the Muslim community at large. Under strong criticism, the newspaper tendered an apology and published an amended version of the same without the robe and the anthropomorphic figure replaced by a stick character.

Conclusion-without-an-Essence:

Such reshaping and refiguring of the object-in-image is a dynamic process and this article has but a pitiful scope to offer to such a discourse. For the same reason, it is not plausible to provide a conventional conclusion to this article; instead of arriving at a teleological end, let us return to one of the scenarios mentioned at the very inception. Despite our discussions so far, at attempt to find direct relationality between a "Corona pakoda" and the Covid-19 pandemic seems implausible. There is no functional congruity between the two and the object-

14 URL: <https://www.cartoonistsatish.com/up-mp-gujarat-suspend-labour-laws/>

15 Hussain, Shaik Zakeer. *The Hindu Publishes Cartoon Showing Coronavirus in Muslim Attire, Takes it down After Backlash*, March 26, 2020, <https://thecognate.com/the-hindu-publishes-cartoon-showing-coronavirus-in-muslim-attire-takes-it-down-after-backlash/>

in-image seems to have transcended its own empirical reality. Consider the masterpiece by René Magritte known as *The Treachery of Images*: picture of a common tobacco pipe with the words “*Ceci n’est pas une pipe*” or ‘this is not a pipe’ written below it. Magritte, true to his surrealist predilection, was messing with human cognition. A similar proposition was forwarded by Peirce who argued that signs can transform themselves to the mode of their cognition. An image usually functions as an indexical or an iconic sign because of its direct visual resemblance with the reality; but with repeated use, it can transform itself to a symbolic sign which is habitual and arbitrary.

In his article on the nineteenth century phenomenon of ‘cholera clouds’, Projit Bihari Mukharji follows the empirical transcendence of the clouds from individuated experience to a pre-experiential reality. By showing how the convictional sightings and historical conception of cholera clouds had informed its scientific reconstruction, he argued that the cholera clouds must be studied as an “object-without-an-essence”, a phrase derived from Gilles Deleuze’s idea of Transcendental Empiricism.¹⁶ Despite a detailed empirical study on the development of this phenomenon though, Mukharji makes no mention of the symbolism of the clouds as such; from the woefully limited study made so far, there is reason to believe that the Sars-CoV-2 organism provides a suitable scope to bring Peirce’s

semiotics and Deleuze’s empiricism on the same plane. This article concludes with the sincere hope that it has provided a viable launching pad for such a study.

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Searching for the New Pasteur: Politics with Covid Pandemic Remedies

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Infectious diseases have plagued humanity since the beginning and have invariably been one of the strongest selective forces that have an impact on human populations. Charles Darwin's theory of evolution of species published in the 19th century reshaped our thinking about human's place in nature from the most supreme to an ever changing species influenced by forces of natural selection like all other species (Karlsson, 2014). This selection process is ancient, including the relation of *Homo sapiens* with both age-old pathogens like those that cause malaria, small pox, cholera, tuberculosis, leprosy and influenza and also with relatively newer threats like AIDS, SARS, MERS and the new Covid 19. However it was not until the marked shift from hunter gatherer to agrarian to industrial metropolis-based communities that the magnitude and spread of these diseases increased dramatically. The more civilized we become with larger cities, elaborate trade routes and unprecedented rates of interaction with other populations, wildlife and ecologies, the more likely that endemic diseases would result in epidemics and possibly to a pandemic. Migrations and cultural changes during their cent human evolutionary history (approximately past 10,000 years) exposed populations to new pathogens as they colonized new

environments. Domestication of wild animals, breaching of man-wild barrier and indulgence in exotic food habits resulted in close contact with animal disease vectors and increased chances of zoonosis. However, this ancient biological 'arms race' between microbial pathogens and humans has shaped genetic variation in modern populations, and this has important implications for the growing field of medical genetics. These primeval human microbe interactions not only influenced human infectious disease susceptibility but also contributed to geographical disparities in disease vulnerability, autoimmune and metabolic responses. An intriguing fact stated by the hygiene hypothesis is that in absence of diverse pathogens from which we need to defend ourselves, our immune response may turn on us. Also, by intruding into previously unexplored habitats and breaching man wildlife boundaries we expose ourselves to new pathogens that are unknown to our immune system, and with the present globalization scenario it is very much probable that these pathogens can cause a pandemic once it establishes us as the new host.

However, this ancient human pathogen arms race was impeded by the legendary culture hero Louis Pasteur renowned for human benefits of his germ theory of

diseases, the use of antiseptichygiene and of vaccines to prevent infections. After English physician Edward Jenner discovered the process of deliberate development of immunity in 1798, targeting the then deadly disease smallpox by introducing fluid from a cowpox pustule into people, Louis Pasteur made the next major leap in immunology by the induction of immunity to cholera in chicken. He then hypothesized and proved that a weakened pathogen could be administered to a healthy organism and provide immunity against the disease. This attenuated strain was called vaccine. In 1885, Pasteur administered his first vaccine to a human, a young boy who had been bitten repeatedly by a feral rabid dog and saved him from the inevitable death caused by a deadly virus. His vaccine worked like a magic band and he became an international hero after this incident. In 1887 Pasteur Institute was opened to treat many rabies victims that began to flood in when word of Pasteur's success spread; it remains to this day an institute dedicated to the prevention and treatment of infectious disease. While the variety of vaccine types increased with time, Pasteur's method is still widely used. Vaccination has substantially reduced morbidity from infectious diseases and this was undoubtedly made possible by the insights of Louis Pasteur, without whom the history of human race would have been different.

With the passage of time our species has changed the history of planet Earth, we have reached new heights of progress and development. With the progress of medical science in controlling infectious diseases once initiated by Pasteur, we now have a much lesser mortality rate throughout the world which is one of the causes of increase in life expectancy. But this has obscured our vision on the continued vulnerability of human species to large scale infections.

We failed to acknowledge our dynamic relationship with microbes as a continued evolutionary process and this overconfident approach was a major setback leading to the present scenario. Although we have a reasonable lead while dealing with bacterial intruders, we grossly neglect protozoan parasites mainly affecting the countries having modest health infrastructure while we are dangerously ignorant about how to cope with viruses. Also, with globalization the probability of spreading of a new disease has escalated thus increasing the chances of unprecedented mass devastation.

The recently hyped corona virus was first discovered in the 1930s and has the scientific name for *Orthocoronavirinae* or *Coronavirinae* (Wertheim, 2013). Corona viruses are divided into alpha corona viruses and beta-corona viruses infecting mammals and gamma-corona viruses and delta corona viruses, infecting birds. Bats and birds, as warm-blooded flying vertebrates, are ideal natural reservoirs for the corona virus gene pool and are reported to facilitate their extensive evolution and dissemination. Six species of human corona viruses are reported with one species subdivided into two different strains, with total seven strains of human corona viruses. Among those 5 belong to β -CoV group (HCoV-OC43 and HCoV-HKU1 producing mild symptoms and MERS-CoV, SARS-CoV and SARS-CoV-2 resulting in severe symptoms) and 2 belong to α -CoV group (HCoV-229E and HCoV-NL63 showing mild symptoms). Although, corona virus is not reported to have caused any major outbreak in the past there are certain views that claims otherwise. It is speculated that the flu pandemic of 1890 may have been caused by corona virus and not by the influenza virus, because of the neurological symptoms and unknown causative agent of the pandemic. The human corona

viruses HCoV-OC43, HCoV-HKU1, HCoV-229E and HCoV-NL63 continually circulate in the human population and produce the generally mild symptoms of the common cold in adults and children worldwide with about 15% of common colds being caused by corona viruses. Almost all human CoVs have zoonotic origins or otherwise circulate in animals [bats (Pfefferle et al. 2009); camels (Sabir et al. 2016), cattle (Vijgen et al. 2005)]. Overall, it seems that CoV diversity in animals is substantial, that these viruses are prone to host switching (Woo et al. 2012), and that they are a current, historic, and future threat to public health. Although, bats harbour a large number of potentially zoonotic CoVs, most of the putative viruses reported are unlikely to pose any direct threat to humans, either because they lack the biological pre-requisites to infect human cells or because the ecology of their hosts limit the opportunity for interactions. However, retaliatory culling of bats will have unforeseen consequences; and can even enhance disease transmission by spill-over.

In 2002/3, SARS-Corona virus (SARS-CoV) emerged in the Guangdong province of southern China (Drosten et al. 2003) quickly spread to twenty-seven countries, infecting 8,098 people with 774 deaths, and was declared the first global pandemic of the 21st century. In 2003, the World Health Organization (WHO) issued a press release stating that a novel corona virus identified by a number of laboratories was the causative agent for SARS, bats being identified as the reservoir (Li et al. 2005) and probable source of the outbreak. The virus was officially named the SARS corona virus (SARS-CoV). In 2012, the SARS pandemic was followed by MERS-Corona virus (MERS-CoV), which emerged in the Middle East (Groot et al., 2013) with 1,782 confirmed human cases and 640 deaths (as of September 2016) and camels were identified

as the likely source of human infections (Tawfiq et al. 2013); while bats were again found to host closely related (MERS-like) viruses and are therefore assumed to be the original evolutionary source (Woo et al. 2012). In September 2012, a new type of corona virus was identified, initially called Novel Corona virus 2012, and now officially named Middle East respiratory syndrome corona virus (MERS-CoV). The World Health Organization issued a global alert soon after. However, despite concerted global efforts since the last decade scientists are yet to find an effective remedy for corona virus infections. Treatment is mostly symptomatic and is directed by the patient's clinical condition. The first line of treatment is only supportive and symptomatic which includes fluid resuscitation, pain reliever, cough suppressants etc. Patients with severe corona virus infections often require oxygen therapy and mechanical ventilation to support life until recovery begins. Also, medical caregivers need to follow strict personal protection policies to avoid being infected.

The recent pandemic started in December 2019 as a pneumonia outbreak reported in Wuhan, China. On 31 December 2019, the outbreak was traced to a novel strain of corona virus which was given the interim name 2019-nCoV by the World Health Organization (WHO), later renamed SARS-CoV-2 by the International Committee on Taxonomy of Viruses. The Wuhan strain has been identified as a new strain of Beta corona virus from group 2B with approximately 70% genetic similarity to the SARS-CoV. The virus has a 96% similarity to a bat corona virus, so it is widely suspected to have originated from bats as well. As of 30 July 2020, there have been at least 689,000 confirmed deaths and more than 18,000,000 confirmed cases in the COVID-19 pandemic.

However, such flu like pandemics were very much predicted by scientific communities since long (Owen et. al, 2013), especially for viral diseases as most anti viral drugs are not effective against many of the most common viruses, including influenza. Because of the high mutation rates of influenza virus the development of a vaccine that will be effective throughout is hindered and necessitates its administration every season. Thus it was speculated that whenever a lethal and unexpected pandemic strain arises, there will be a race between its spread and the manufacture and administration of a new vaccine. Also, with globalization and current ease of worldwide travel, present day surfacing of a pandemic strain of influenza could dwarf the damage wrought by the 1918 flu pandemic, which left an estimated 50 million dead. This is almost true for the present pandemic situation caused by Covid 19. But, even with previous speculations, when the disease first surfaced in Wuhan it was not considered seriously. Instead, governments of most countries driven by their political agendas and economic aspirations were reluctant to take action immediately which caused the rapid spread of the virus. This initial reluctant attitude was further supported by the official declaration of WHO on social media on January 14, 2020 quoting that there was no clear evidence that corona virus could spread between people. However, on March 11, 2020 it was declared a global pandemic by WHO with 118000 reported cases from over 110 countries. Soon thereafter, it resulted in travel restrictions and nationwide lockdowns in many countries to slow down the spread of the disease to buy some time to fight the pandemic, obviously not without large scale collateral damages whose extent depended on the cultural and socio-political scenario of the nations.

Due to the urgent need for effective treatments, there has been increased interest in re-purposing currently available drugs for immediate use even before proper investigation. The panicked situation thus created confusion by spreading rumours quickly about any proposed remedies, media playing a major role in that. The drugs which are available in market for Covid 19 treatment are no wonder drugs and are not reported to act on the virus directly. They are either immune resultants that impact the immune response of the host or corticosteroids. In many cases, such drugs when administered without thorough knowledge about the medical condition of the patient worsened the condition further even leading to death for some. For example, in March 2020, the US President Donald Trump stated that chloroquine and hydroxychloroquine, two related anti-malarial drugs, had been approved by the US Food and Drugs Administration for treating COVID-19. The FDA later clarified that it has not approved any therapeutics or drugs to treat COVID-19, but that studies were underway to see if chloroquine could be effective in treatment of COVID-19. Although many anti-malarial drugs like Hydroxychloroquine are reported to complement other compounds in combination drug therapy because they interfere with the antigen processing in macrophages and other antigen presenting cells, it was not proved to act specifically for COVID-19. But following the President's claim, panic buying of chloroquine was reported from many countries in Africa, Latin America and South Asia. Patients with lupus and rheumatoid arthritis, who take these medications regularly, have had trouble obtaining supplies.

Rumours were circulated in Iraq that the Iraqi pharmaceutical company PIONEER Co. had discovered a treatment for corona

virus. These reports were loosely based on a statement by PIONEER, which mentioned hydroxychloroquine sulphate, azithromycin, and zitroneer and said that it would try and make these drugs available free of charge. The statement did not say that these drugs can cure COVID-19. The company later clarified that they had not attempted to find a cure for COVID-19, and criticized the news media for spreading inaccurate reports and misinformation, running with the story without checking whether they had misunderstood the company's statement. Two days later, another false story was widely reported, saying that Samaraa, another Iraqi pharmaceutical company, had found a cure. Generally, antibiotics (like azithromycin) are not effective against viruses, only some bacteria. Azithromycin is sometimes given to patients hospitalized with COVID-19, but only to treat bacterial co-infection. Overuse of azithromycin causes antibiotic resistance, and rare side effects include heart arrhythmias and hearing loss. Another drug **Remdesivir** is an adenosine triphosphate analog first described in the literature in 2016 as a potential treatment for Ebola (Sheahan et al., 2017; de Wit et al., 2020) was granted an FDA Emergency Use Authorization on 1 May 2020. This is not the same as an FDA approval. Another drug **Ritonavir** is an HIV protease inhibitor that interferes with the reproductive cycle of HIV. Although it was initially developed as an independent antiviral agent, it has been shown to possess advantageous properties in combination therapy (Chu et al., 2004). Although, there is currently no strong evidence for the efficacy of ritonavir in the treatment of COVID-19 it is a potential candidate its treatment. **Anti IL-6**, another candidate for Covid 19 treatment are interleukin inhibitors that targets the COVID-19-associated systemic inflammation and hypoxic respi-

ratory failure with heightened cytokine release, as indicated by elevated blood levels of IL-6, C-reactive protein (CRP), D-dimer, and ferritin. However, there are insufficient data to recommend either for or against the use of interleukin-6 (IL-6) inhibitors (e.g., sarilumab, siltuximab, tocilizumab) for the treatment of COVID-19. Another drug, **dexamethasone**, a corticosteroid with reported anti-inflammatory and immunosuppressant effects has been used since the 1960s to alleviate inflammatory conditions and treat certain cancers. It has been listed on the WHO Model List of Essential Medicines since 1977 in multiple formulations. It was tested in hospitalized patients with COVID-19 in the United Kingdom's national clinical trial RECOVERY and was found to have benefits for critically ill patients. The benefit was only seen in patients seriously ill with COVID-19, and was not observed in patients with milder syndrome. Another potential drug, **Favipiravir** is a modified pyrazine analog that was initially approved for therapeutic use in resistant cases of influenza. The antiviral targets RNA-dependent RNA polymerase (RdRp) enzymes, which are necessary for the transcription and replication of viral genomes. It has been investigated for the treatment of life-threatening pathogens such as Ebola virus, Lassa virus, and now COVID-19. Drug firm Glenmark Pharmaceuticals, under the brand name FabiFlu, has launched Favipiravir, to cure patients with mild to moderate corona virus. However it is no magic drug that can specifically target SARS-CoV-2, but trials on moderately ill patients were proved to be satisfactory, hence shows potential to be useful in the present scenario. However, FabiFlu is the oral approved medication for the treatment of COVID-19 in India.

There are many fake and unproven medical products and methods that claim to diagnose, prevent and cure COVID-19.

Fake medicines sold for COVID-19 may not contain the ingredients they claim to contain, and may even contain harmful ingredients. The WHO has requested member countries to immediately notify them if any fake medicines or other falsified products are discovered. There are also many claims that existing products help against COVID; these spread through rumours online rather than conventional advertising. Anxiety about COVID-19 makes people more willing to “try anything” that might give them a sense of control of the situation, making them easy targets for scams (Anthony 2020). The public were advised to check the information sources they entrusted and follow official websites since some messages have falsely claimed to be from official bodies like UNICEF and government agencies. Products which claim to prevent COVID-19 risk giving dangerous false confidence and increasing infection rates. Going out to buy such products may encourage people to break stay-at-home orders, reducing social distancing. Some of the pretend treatments are also poisonous; hundreds of people have died from using fake COVID-19 treatments. In India, on June 2, 2020 the AYUSH Ministry had issued a circular to the principal secretaries of all states to take necessary action “against instances of misleading information, fake claims and misbranding”. Soon thereafter, on June 23, 2020 Indian Patanjali Ayurved Ltd launched what they claimed was the first Ayurvedic medicine to cure Covid-19. During the launch it was claimed that ‘Coronil tablet’, ‘Swasari Vati’ and ‘Anu Taila’ had shown “100 per cent favourable results” during clinical trials on Covid-19 patients. However, when asked to present the related documents by AYUSH Ministry they failed to produce them and were thus directed to stop advertising such claims.

With medicines showing limited poten-

tial, development of a new vaccine seems the only way to fight the pandemic. Since the outbreak there are many worldwide ventures to develop one as soon as possible. Vaccine preparation is generally a long process which takes several years to reach from conception to market being an elaborate process that includes exploratory, pre-clinical, clinical and regulatory approval stages. However, researchers worldwide are working around the clock to find a vaccine against SARS-CoV-2, the virus causing the COVID-19 pandemic (Phelan, 2020). Experts estimate that a fast-tracked vaccine development process could speed a successful candidate from lab to market in approximately 12-18 months – if the process goes smoothly from conception to market availability. The pandemic has created unprecedented public/private partnerships. Operation Warp Speed (OWS) is a collaboration of several US federal government departments including Health and Human Services and its sub agencies, Agriculture, Energy and Veterans Affairs and the private sector. Within OWS, the US National Institutes of Health (NIH) has partnered with more than 18 biopharmaceutical companies to accelerate development of drug and vaccine candidates for COVID-19. The University of Oxford and British-Swedish pharmaceutical giant, AstraZeneca are jointly working on the production of a vaccine, ChAdOx1 nCoV-19, by using a weakened version of the common cold virus, adenovirus. The US government short listed three vaccine candidates to fund for Phase 3 trials under Operation Warp Speed: Moderna’s mRNA-1273 in July, 2020, the University of Oxford and AstraZeneca’s AZD1222 in August, and Pfizer and BioNTech’s BNT162 in September (Folegatti et al., 2020). Initially, there was some fake news regarding vaccine availability that misdirected the

whole world. For instance, in March 2020, Donald Trump, president of USA claimed that Roche Medical Company will launch a vaccine for corona virus by that month and that millions of doses of the vaccine were ready. Needless to say, such claims were later proved to be baseless. As the world competes to develop a strong vaccine against COVID-19, China has spearheaded the development of its most promising vaccine being developed by a research and biotech based firm, CanSino. While the vaccine is still not approved for wide use, the company, which co-produced the vaccine with Chinese Academy of Military Medical Sciences said that the usage of the same cannot be commercialized unless it's cleared by the military wing. India is also not much behind in the race with a vaccine named 'COVAXIN' being produced by Bharat Biotech in collaboration with Indian Council of Medical Research (ICMR) and National Institute of Virology (NIV) which won the approvals from Drug Controller General of India (DGCI) in June, 2020 to start phase I and II clinical trials and might be available by the end of this year (Malladi et al., 2020). However, with this race going on, Russia becomes the first country in the world to launch a Covid-19 vaccine on August 12, 2020 when a vaccine prototype named Sputnik V produced by Gameleya Institute and Russian Defence ministry was successfully registered (Petersen and Zumla, 2020).

However, without being sceptical about the efficacy of the vaccines developed we should not also ignore the fact that all these vaccines are prepared in a much shorter time span than the required standard because of the emergency situation. Thus, although they will provide a temporary protection and relief, a question still remains about

their durability. However, its also expected that the pathogen will weaken with time as evident from the increased number of asymptomatic patients and herd immunity will be approached in many zones, and this pandemic will be under control. However, this pandemic cannot be controlled only by developing a proper vaccine. Inculcating broader scientific temper among the larger populace and improved technological architecture for preventing pseudo-science based claims going viral is a prerequisite for breaking the psychological barrier of vaccination-scepticism and resistance thus leading to global success of the vaccination process

Thus with the passage of time, this pandemic will be controlled giving us an illusion of Human's victory over nature. But this pandemic is the evidence of a much greater crisis that cannot be terminated with the controlling of Covid 19. There are many viruses and other pathogens hidden in natural world to which we were not exposed to in the past. Our very existence was put under threat with the unprecedented exploitation of nature that soared exponentially in the last few decades. This breached our boundaries with wildlife and disturbed virgin paleo-environments, the potential reservoir of many pathogens previously unknown to our immune system. Such insensible act that is presently skyrocketing than ever will open the pandora's box of pathogens any day and can push human race to edges of extinction. And it is not unlikely that some of those pathogens will be much more dangerous than the present corona virus and we might have to face much more grave situations beyond our imagination. Thus to save ourselves we should start conserving the balance of nature and also try to undo the damages already done. It should be treated as an emergency situation, the future has almost arrived and we need to act on it

right now. Louis Pasteur changed the fate of human history by creating a life saving vaccine with an idea that was ahead of its time. The moment he pushed his first vaccine in a young boy infested with rabies virus he not only saved his life but also gave a lifeline to all humankind to free itself from a pathogen which kills the host that brings it to life. Now, the pathogen we are fighting is not only the virus but also our tendencies that prevent us from comprehending the actual value of life. Like the virus, we are also destroying the planet that nurtures us. To save our race and cure ourselves from these self- annihilating tendencies we need a new Pasteur who can think ahead of time and lead us towards the much coveted new normal.

(The data furnished in this article is updated till Sept 2020)

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Polyphenols from Indian Medicinal Plants: Plausible Resource of Drug Discovery against nCOVID19

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Key words: Fenton reaction-mediated damage, nucleic acid, topoisomerase-I, topoisomerase-II, polyphenols, *Camptotheca acuminata*, *Phyllanthus emblica*, *Terminalia chebula*, *Terminalia belerica*, *Acacia catechu*, *Dolichos biflorus*, *Hemidesmus indicus*, and *Spondias dulcis*.

Since ancient times, Indian herbs have been used in the treatment and as preventive strategy for several diseases, including respiratory viral infections. The benefit of using these herbs in viral respiratory infections is to build immune stimulating and inflammation modulating effects to manage the immune system. Holistic approach of AYUSH systems of medicine gives focus on prevention through lifestyle modification, dietary management, prophylactic interventions for improving the immunity and simple remedies based on presentation of the symptoms. There are several Indian medicinal plants and those may be used for preventive and prophylactic actions against SARS-CoV-2.

The analysis of SARS-CoV-2 ultrastructure has shown that they form pleomorphic particles that are incompletely spherical but display variations in shape and size (80–120nm in diameter). The whole SARS-CoV replication cycle takes place in the cytoplasm. Overall, enveloped viruses are capable to use a diversity of cellular membranes at several steps of the virus life cycles [1-3].

All the microbes carry their genetic material

in the form of DNA or RNA. Corona virus is an RNA containing virus. As a result, its mutation rate is extremely high. The RNA synthesis must be prevented to reduce the spread of corona viruses. Researchers thought that the herbal ingredients of some medicinal plants will be effective as antimicrobial agent; DNA elements are destroyed under the influence of herbal extracts, and in corona viruses, the elements that are essential for the manufacture of RNA, such as nucleosides and nucleotides, will be destroyed by the effect of Fenton reaction-mediated damage to nucleic acid constituents. Because the DNA and RNA components are chemically equivalent, therefore, the effect of the extracts will slow down or stop the process to synthesize RNA.

Topoisomerases are ubiquitous nuclear enzymes which alter the topological state of nucleic acids by introducing or removing strands or superhelical coils, tying or untying knots and by decatenating inter locked RNA or DNA [4, 5]. They have critical roles in removal of RNA strands and DNA super coils generated by various cellular processes like replication and transcription, unlinking of inter twined RNA strands and DNA duplexes, chromosome

segregation, DNA condensation and genome stability [4, 5]. Broadly, all cells contain two major forms of topoisomerase, type I which causes transient break in RNA and DNA strand and type II which cleaves both the strands of DNA [4, 5].

Many topoisomerase inhibitors are in current use, have been originally isolated from plant resources and then chemically modified to improve their pharmacological properties. For example, camptothecin, a topoisomerase I inhibitor, was first identified from the tree *Camptotheca acuminata* [6].

Most of the topoisomerase inhibitors in current use were isolated from plants and thus there is considerable interest in identifying novel inhibitors from plant products. In continuation of the search for new topoisomerase inhibitors, researchers investigated on extracts of *Phyllanthus emblica*, *Terminalia chebula*, *Terminalia belerica*, *Acacia catechu*, *Dolichos biflorus*, *Hemidesmus indicus*, and *Spondias dulcis*. Recent studies have demonstrated that some of these extracts have potential anticancer effect [7-11] also. These plants have been traditionally documented in India for their popular medicinal uses [12], compiled by organic chemists [13-14] and their antioxidant [15-16], anticancer [17-22] activity is well documented.

Tannic acid is a water-soluble polyphenol present in plant food such as tea, red wine, beer and nuts. In addition, tea polyphenols and many tannin components are thought to have anticarcinogenic [23, 24] property.

The standardized water extract of the edible fruits of *Phyllanthus emblica* contain low molecular weight hydrolysable tannins, comprising Emblicanin-A, Emblicanin-B, Pedunculagin and Puniguconin which are bioactive medium molecular weight (500-700 Da) polyphenols. They are completely hydrolysable into components, viz. sugar derivatives, gallic acid and hexahydroxy- diphenic acids. They can be used in two broad areas of nutritional and

therapeutic applications, namely, (i) transition metal ion complexation; and (ii) antioxidants in cellular pro-oxidant states, without having any pro-oxidant effect per se. *Phyllanthus emblica* is the embodiment of such a gallo-ellagitannoid having an array of proven therapeutic effects.

Free metal in ionic state could produce deleterious oxygen centred radicals by Fenton-Haber-Weiss type reactions. Use of effective metal chelators could prevent such situations. However, most of the chelators suffer from incomplete chelation of all the co-ordination sites of the central metal ions; prone to Fenton-Haber-Weiss type reactions and leads to pro-oxidant activities *in vivo*.

Fruits of *Terminalia chebula* Retz. (Fam. Combretaceae) have been extensively used in Ayurvedic, medicine as a remedy against various human ailments [25, 26]. *Terminalia chebula* contains 32–56% polyphenolic compounds including gallic acid, ellagic acid, chebulic acid, chebulinic acid, punicalagin, and tannic acid. The flavonoids include quercetin, catechin, and kaempferol. Saccharides are present at 6–9%, and include D-glucose, D-fructose, and saccharose. Quinic acid at 1.5%, and shikimic acid at 2% are the prevalent fruit acids.

The standardized aqueous extract of the edible fruit of *Terminalia bellerica* contains more than 15% of chebulinic acid, chebulagic acid and other low-molecular-weight hydrolysable tannins. [27].

Gum exudates from *Acacia catechu* also reported to have antioxidant activity. Several natural bioactive compounds such as (+)-catechin, (-)-epicatechin, (-)-epicatechin-3-O-gallate, epigallocatechin-3-O-gallate, quercetin, (+)-cyanidanol have been isolated from heartwood, bark, roots, leaves and stem of *A. catechu*. [22, 28]

Hemidesmus indicus root contains polyphenolics coumarino-lignoid

compounds. The common structural feature of these rare compounds, viz. hemidesminine (XVII) [29], hemidesmine-1 (XVIII) [30], hemidesmine-2 (XIX) [31] is that they have a coumarin unit linked to a lignoid C6-C3 unit.

Fruits of *Spondias* sp. are rich in different classes of secondary metabolites. Among the isolated phenolic compounds, geraniin, galloylgeraniin, galloyl glucose, rhamnetin, isorhamnetin, kaempferol, kaempferide, astragalin, isoquercetin, and quercetin dihydrate were identified [32].

Extract of *Glycyrrhiza glabra* in high concentration could stimulate the secretion of IFN- β which has multiple anti-viral activities, including inhibition of viral penetration, un-coating, mRNA translation, protein synthesis, genome replication, virus assembly and releasing of virus particles, to counteract viral infection [32].

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Emergence of a D614G Mutation in the Spike Protein of 2019 Novel Coronavirus, a Trojan Horse

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Abstract

Recently a novel coronavirus (2019-nCoV) has emerged from Wuhan, China causing substantial morbidity and mortality in humans, especially in the elderly population. This newly emerged virus has spread rapidly to almost the entire globe. The symptoms are familiar to those affected by the SARS coronavirus (SARS-CoV). These viruses harbour a spike surface glycoprotein which specifically interacts with the human angiotensin-converting enzyme 2 (ACE2) receptor. However, during its pandemic progression, these 2019-nCoVs accumulated several mutations in their RNA genomes, especially in the spike surface glycoprotein. As these spike proteins are a good target for vaccine development, mutations in them have limited the development of a proper candidate vaccine severely. To address different spike protein mutations and inter-genomic resemblance, mutation and comparative genomic analysis were carried out in this study using several publicly available 2019-nCoV genomes. A predominant mutation in spike surface glycoprotein (S: D614G) was observed in 71.4% of the studied 2019-nCoV genomes. Spike protein-based phylogenetic analysis revealed the most diverse nature of an Indian strain IND_GBRC108. The occurrence of 99.9% inter-genomic similarity with the parental Wuhan strain strongly suggests their common ancestral origin. This current study provides a snapshot of a predominant S protein mutation and inter-genomic resemblance of 2019-nCoVs strains.

Keywords: 2019 novel coronavirus (2019-nCoV), Genome, Spike protein, Mutation.

Introduction

Recently the emergence of the notorious 2019 novel coronavirus (2019-nCoV) in Wuhan, China has put the entire globe on red alert (Zhang T et al., 2020). The disease due to 2019-nCoV is responsible for substantial morbidity and mortality, especially in the elder population due to the presence of several co-morbidities. According to WHO, as on 9th June 2020 globally there

were confirmed 7,039,918 coronavirus 2019 (COVID-19) cases and 404,396 deaths (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>) (WHO situation report 141, 2020). In India, till 9th June 2020, 2,66,579 COVID-19 cases and 7,471 deaths have been recorded (<https://www.mohfw.gov.in/>). Just like the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and Middle Eastern Respiratory Syndrome Coronavirus

(MERS-CoV), the 2019-nCoV (SARS-CoV-2) belongs to the same Coronaviridae family, genus Betacoronavirus. These are enveloped viruses with a positive-sense single-stranded RNA (+ssRNA) of around 28 to 32 Kb (Ortega JT et al., 2020). The 2019-nCoV particles contain four major structural elements, including the spike surface glycoprotein (S), a small envelope protein (E), matrix protein (M), and nucleocapsid protein (N) (Cui J et al., 2019). The spike protein of the virion plays an essential role in binding to the receptors on the host cell surface (Li F, 2016). Scientific evidence from structural studies showed that S proteins of SARS-CoV and SARS-CoV-2 interact with the host angiotensin-converting enzyme 2 (ACE2) receptor (Chen Y et al., 2020; Wan Y et al., 2020). This strong interaction results in both the cross-species and human-to-human transmission. As the SARS-CoV-2 exhibits their pathogenic potential primarily via spike proteins, several researchers from all over the globe are trying to develop a potential candidate vaccine against the 2019-nCoV spike protein to eradicate the disease. However, during the course of pandemic progression, the 2019-nCoVs acquired several mutations in their RNA genomes (especially in their spike protein) which gave them a selective value over the parental Wuhan strain. As these mutations provide them with a wide range of divergent genomic characteristics and limit the therapeutic options, a study on mutation is an utmost requirement. In this current study, mutation analysis of S protein and comparative genomics of different 2019-nCoVs were carried out.

Methods

SARS-CoV-2 genomes

A total of randomly chosen 14 different human SARS-CoV-2 genomes were retrieved

from the GenBank (<https://www.ncbi.nlm.nih.gov/genbank/>), including Wuhan-Hu-1 (MN908947.3), CHN_IME-HZ01 (MT039874.1), ITA_INMI1 (MT066156.1), USA_NC_0025 (MT344963.1), USA_UNC_200189 (MT308704.1), USA_AZ-ASU2936 (MT339041.1), USA_NY-PV09189 (MT371038.1), USA_UF-5 (MT422807.1), IND_GBRC94 (MT509503.1), IND_GBRC97a (MT509507.1), IND_GBRC101 (MT509511.1), IND_GBRC108 (MT509502.1), DEU_BavPat2-ChVir984-ChVir1017 (MT270112.1), and DEU_BavPat16-ChVir1530 (MT270113.1).

Annotation and determination of viral open reading frames (ORFs)

The putative ORFs of all 14 studied SARS-CoV-2 genomes were determined using the Coronaviridae-specific Viral Genome ORF Reader 4 (VIGOR4) annotator tool (<https://www.viprbrc.org/brc/vigorAnnotator.spg?method=ShowCleanInputPage&decorator=corona>) (Wang S et al., 2010), available at the Virus Pathogen database and analysis Resource (ViPR) repository (Pickett BE et al., 2012).

Comparative nCoV S protein alignment and phylogeny

Among the several retrieved gene products, a multiple protein sequence alignment of 2019-nCoV surface glycoproteins (Spike proteins) from all tested genomes was carried out by Clustal Omega programme (<https://www.ebi.ac.uk/Tools/msa/clustalo/>) (Sievers F and Higgins DG, 2014) which uses seeded guide tree and Hidden Markov Model (HMM) to generate multiple alignments between sequences. From the multiple 2019-nCoV S protein alignment, mutation and phylogenetic analysis (via seeded guide tree) were also performed.

Comparative genomic analysis

The comparative BLASTN analysis of the Wuhan-Hu-1 and the rest of the other studied 2019-nCoV genomes (n = 13) was carried out by the standalone OrthoANIu tool (<https://www.ezbiocloud.net/tools/ani>) (Yoon SH et al., 2017).

Results

Identification of nCoV ORFs

VIGOR4 annotation tool revealed the presence of ORF1a polyprotein, ORF1ab polyprotein, leader protein, 3C-like proteinase, RNA-dependent RNA polymerase, helicase, 3'-to-5' exonuclease, endoRNase, 2'-O-ribosemethyltransferase, several non-surface proteins (nsp 1 - 16), surface glycoprotein (S), ORF3a protein, an envelope protein (E), membrane glycoprotein (M), ORF6 protein, ORF7a protein, ORF7b protein, ORF8 protein, nucleocapsid phosphoprotein (N), and ORF10 protein in all studied genomes. The tested genomes of SARS-CoV-2 were ranged from 29719 to 29903 bp with approximately 38% of G + C content **Table 1**.

Mutations analysis of S protein

Analysis of multiple 2019-nCoV S protein sequence alignment by Clustal Omega showed that all studied spike proteins were highly similar to an average amino acid identity of 99.9% except for two different changes. In this study, the author identified 71.4% (n = 10) of 2019-nCoV strains, including USA_NC_0025, USA_UNC_200189, USA_AZ-ASU2936, USA_NY-PV09189, USA_UF-5, IND_GBRC94, IND_GBRC97a, IND_GBRC108, DEU_BavPat2-ChVir984-ChVir1017, and DEU_BavPat16-ChVir1530 which harboured a predominant amino acid replacement D614G mutation in their spike protein. Here the original aspartic acid (D) residue at the 614 amino acid position has been replaced by a glycine (G) molecule. Also,

IND_GBRC108 harboured an additional amino acid replacement mutation L54F in its spike protein where the original leucine (L) residue at 54 amino acid position has been replaced by a phenylalanine (F) molecule (**Figure 1a**).

S protein-based phylogeny

From this analysis, the author noticed that the spike protein of IND_GBRC108 possessed a greater number of mutations compared to the other S proteins. S protein-based phylogenetic outcome also validates the mutation analysis. As the S protein of IND_GBRC108 harboured two different mutations (L54F and D614G), IND_GBRC108 S protein was found to be more diverse phylogenetically. Moreover, as the spike protein of USA_NC_0025, USA_UNC_200189, USA_AZ-ASU2936, USA_NY-PV09189, USA_UF-5, IND_GBRC94, IND_GBRC97a, DEU_BavPat2-ChVir984-ChVir1017, and DEU_BavPat16-ChVir1530 which harboured the same D614G mutation and belonged to the same cluster that differs remarkably from the other cluster, comprised of Wuhan-Hu-1, CHN_IME-HZ01, ITA_INMI1, and IND_GBRC101 with no mutations in their S protein (**Figure 1b**).

Comparative genomics

Comparative BLASTN analysis between Wuhan-Hu-1 and other 2019-nCOVs via OrthoANIu tool revealed the high genomic similarities with the 99.9% of average nucleotide identity. As no mutation was detected in CHN_IME-HZ01 strain, 100% similarity was observed (**Table 1**).

Discussion

Mutation analysis followed by S protein-based phylogeny suggests the more divergent nature of the Indian strain IND_GBRC108. D614G mutation of S protein was detected predominantly in the ten

strains. Current reports from various parts of the globe revealed that the worldwide prevalent D614G mutation in S protein is the most critical one as this thermodynamically favours the host-pathogen interaction by several-folds, hindering vaccine development severely (Zehender G et al., 2020). Comparative genomic analysis revealed that all 2019-nCoV strains were highly similar to the parental Wuhan strain (99.9% average nucleotide identity). This strongly suggests their common ancestral origin, consistent with the other similar report (Yin C, 2020).

This current study provides a snapshot of a predominant S protein mutation and inter-genomic resemblance of 2019-nCoVs strains. From this study, the author speculates that the S: D614G mutation probably provides them with a positive selection value over the parental strain. However, much research in this area is still required to come in any conclusive remark. In addition, strict infection control measures, including hand hygiene and social distancing should be maintained to combat with these deadly pathogens.

Table – 1.

Represents comparative genomic output and predominant S: D614G mutation in the studied 2019-nCoV genomes (n = 14).

2019-nCoV strain name	GenBank accession	Genome size (bp)	A	C	G	T	N	G + C content (%)	ANI (%) between Wuhan-Hu-1 and other 2019-nCoVs	Amino acid replacement mutation S:D614G	Country of origin
Wuhan-Hu-1	MN908947.3	29903	8,954	5,492	5,863	9,594	0	37.9	NA	No	China
CHN_IME-HZ01	MT039874.1	29858	8,916	5,492	5,861	9,589	0	38	100	No	China
ITA_INMI1	MT066156.1	29903	8,919	5,491	5,860	9,596	1	37.9	99.9	No	Italy
USA_NC_0025	MT344963.1	29835	8,932	5,487	5,859	9,600	4	38	99.9	Yes	USA
USA_UNC_200189	MT308704.1	29819	8,932	5,487	5,859	9,600	4	37.9	99.9	Yes	USA
USA_AZ-ASU2936	MT339041.1	29,903	8,953	5,488	5,863	9,599	0	37.9	99.9	Yes	USA
USA_NY-PV09189	MT371038.1	29,719	8,873	5,458	5,834	9,554	0	38	99.9	Yes	USA
USA_UF-5	MT422807.1	29,903	8,952	5,486	5,864	9,601	0	37.9	99.9	Yes	USA
IND_GBRC94	MT509503.1	29,800	8,894	5,472	5,855	9,579	0	38	99.9	Yes	India
IND_GBRC97a	MT509507.1	29,800	8,898	5,472	5,848	9,582	0	37.9	99.9	Yes	India
IND_GBRC101	MT509511.1	29,800	8,889	5,473	5,845	9,569	24	38	99.9	No	India
IND_GBRC108	MT509502.1	29,800	8,895	5,470	5,851	9,584	0	37.9	99.9	Yes	India
DEU_BavPat2-ChVir984-ChVir1017	MT270112.1	29,858	8,917	5,489	5,862	9,590	0	38	99.9	Yes	Germany
DEU_BavPat16-ChVir1530	MT270113.1	29,787	8,895	5,473	5,850	9,569	0	38	99.9	Yes	Germany

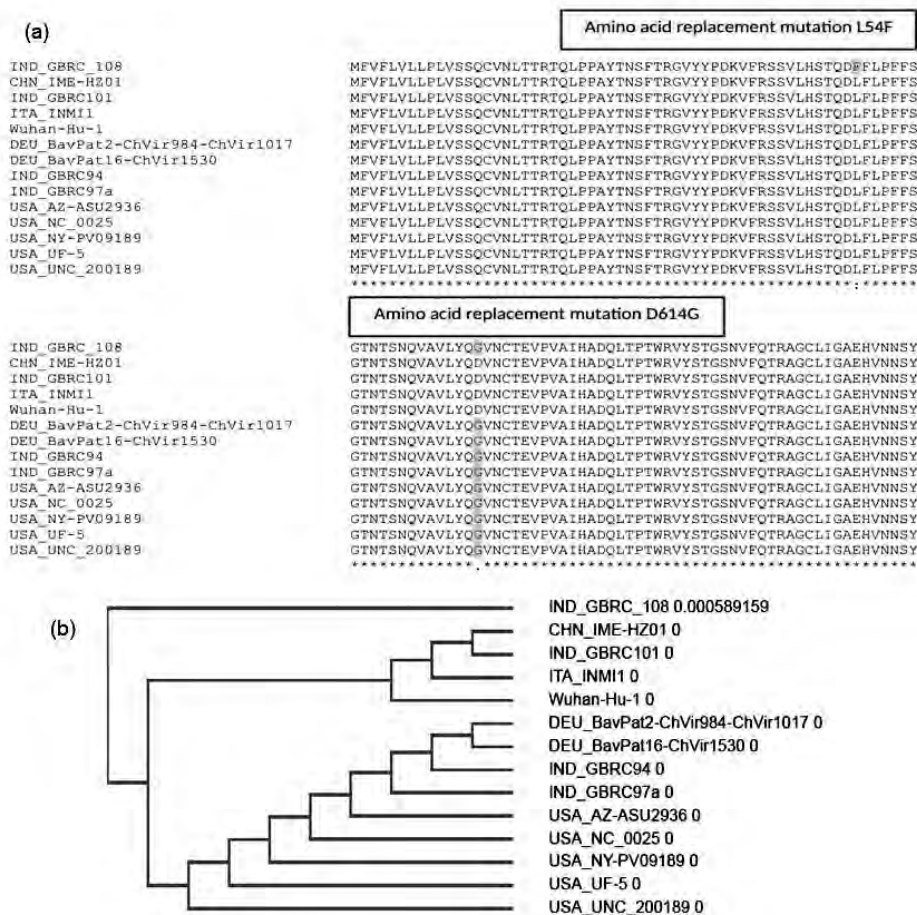


Figure 1 - Comparative analysis of nCoV's spike proteins and phylogeny. (a) Multiple sequence alignment represents amino acid changes in the S protein of 14 retrieved genomes; (b) 2019-nCoV Spike protein-based phylogenetic tree; "(The entire amino acid sequence alignment of the S protein is not shown here)"

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Impact of Covid 19 Disaster and Lockdown Period on Family Relations: A Study Among Urban Women of Kolkata

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Introduction

The world is undergoing a severe crisis at this moment as the sudden outbreak of global pandemic of Covid 19 has forced the world to almost shut down its regular processes of modern life. Like many other countries India has also experienced a complete and continuous lockdown since March 23, 2020 till 7th June, 2020. From 8th June the phase of unlock 1 has been initiated in places except containment zones, where infected persons have been found. During this phase educational institutes are still closed, but offices, some public transport services, shops and some other non-essential services are open, though people are still instructed to maintain social distance, wear mask, and avoid social gatherings. During the nationwide lockdown most of the citizens (except those engaged in emergency services like medical services, administration and police services) are forced to stay inside home. Social distancing is the essential way of living these days. The pandemic and the lockdown has changed the modern style of living to a life with basic amenities only. However, a section of population though confined to their homes, can continue

interaction through Internet and social media and they are able to have social closeness while maintaining physical distance.

Under this abnormal situation as most of the economic activities are stopped, a huge number of people have lost their earnings. Among the middle class only a section of salaried people of both public and private sector have remained economically stable and all other are facing severe problems to earn their livelihood. Many daily labourers, small businessmen either have lost their jobs or are facing reducing business prospects and definitely are passing through hard economic realities. Many people have to work from home and thus the realities of home and workplace have been merged.

Due to the sudden announcement of nationwide lockdown a huge number of migrant labourers, separated from their families, were stuck at their workplace in different states. They have lost their jobs and are unable to come back home as all modes of transportation have been stopped. Besides, many tourists, health tourists were also forced to stay back at a distant place from their homes. Many people, who were away from home due to some reason or

other, were also unfortunately separated from their families due to the unexpected lockdown.

As a whole, it can be definitely said that all families are undergoing a very crucial economic and social condition at this time. The regular routine of the families has been totally changed as almost all have to stay home only. Moreover the families having domestic helpers are also facing tough time as they have to manage all household work without those helpers. The urban population also have to live without all outside sources of modern entertainment and recreational activities, like multiplex, shopping malls etc.

The present paper intends to study whether this pandemic of Covid 19 and the nationwide lockdown has any impact on families, particularly on middle class families and how does it impact family relations and family structure.

Method of Study

The present study follows a qualitative method and is based on primary data collected through interview on telephone. 15 married women respondents, aged between 30- 55 years, belonging to middle class families of West Bengal were selected on the basis of purposive sampling for this study. Among the respondents, 6 belong to nuclear family, who live with their spouse and with or without children, rest are from joint families, living with spouse, children and in laws. When 12 respondents work as teachers in schools and colleges, 3 are home-makers. An unstructured and in-depth interview method has been used to collect necessary data for the study. Secondary data have also been acquired from newspapers and the current research papers available on internet.

Family - Sociological Perspectives

Family is the smallest unit of social life even today. In Sociology, the concept of 'family' have been analysed differently from different perspectives. From a functionalist perspective, George Peter Murdock (1949), in his famous cross national study of families defines family as "a social group characterised by common residence, economic cooperation and reproduction. It includes adults of both sexes, at least two of whom maintain a socially approved sexual relationship, and one or more children, own or adopted, of the sexually cohabitating adults". However, many Sociologists criticise this definition as being too narrow because many groups of people who regard themselves as a family would not be included in the above definition, such as reconstituted or step-families and same sex families.

Post-modern thinkers define family in a broader sense, which includes a range of family types—ones suggested definition of the family is 'a group of people who are related by either blood or marriage/similar form of committed relationship'. The recent trend is to describe family in terms of household, which is simply a group of people who share a residence in common and share such things as meals, bills, facilities or chores, or one person living alone. On the other hand, families can spread themselves across many households.

According to functionalism family exists in all societies and perform certain essential functions for social life. Murdock specifies four basic functions of family, namely, sexual, economic reproductive and educational. However, he did not attempt to explore whether these social needs are fulfilled by other institutions. Other writers have added one more function to Murdock's list of basic functions of family – social placement.

Notable sociologist Talcott Parsons (Parsons and Bales, 1955) held that family performs the function of socialisation. They assert that primary socialisation within the family structures a child's personality according to the particular culture of its society. Parsons believed that in order to carry out primary socialisation effectively, the family must have clearly differentiated roles of father and mother - mother provides warmth and emotionality within the home, whereas father is the breadwinner, who looks after the family's economic security through his activities, especially economic, in the world outside the home. According to him, the second major function of family in modern industrial societies, is 'stabilising the adult personalities'. Some other sociologists like MacIver and Page do point out the importance of new specialised institutions, which are taking over some functions of family. The Welfare State started taking over some non-productive economic functions of family, as well as through universal education the state agencies replace the family in providing for a very important need of the society.

Neil Smelser studied how the historical shifts changed the family. He does not question the universality of the family, but at the same time he also does see family changing its form with the emergence of industrialisation and the factory system. Now the family is no longer a productive unit. The family had to adapt to this change and as a non-productive unit it had to develop a new form of differentiation of occupational roles within the family. Instead of all working together within the home, now men became the chief factory workers, children stopped productive work and women stayed at home, engaged in domestic work rather than working along with their husbands. However, such change did not occur very smoothly, rather there

were protests, struggles, and campaigns by people. But Smelser observes that legislations, particularly factory legislations ultimately brought the change through the imposition of restrictions on the work of women and children in the factory. Smelser believes that the family gradually adapted to this new situation and a new functionally integrated equilibrium was established.

The functionalist view defends the functional necessity of family and is seen as conservative in its implications, whereas conflict perspective emphasises that family may also give rise to many problems. The family may contribute to reinforce existing social inequality, as after industrialisation the family became more patriarchal, giving the men all benefits within the family. The conflict theorists also believe that the family may not be always harmonious, rather it may be a place of emotional cruelty and physical violence. Marxism stresses upon the possibility of social change and it provided a critique of the existing social institutions, including family, of capitalist society. In the 1970s Marxist feminists argued that in capitalist society, women's domestic labour, especially housework and childcare, both refresh the today's workers as well as train the next generation. Unlike in other societies where family is the production unit, in capitalist society, family becomes a unit exclusively devoted to care and consumption. Moreover, in such wage based societies the unique unpaid nature of domestic work makes women dependent on their wage earner husbands and male members.

Symbolic interactionists focus on the analysis of patterns of communication, interpretation and adjustment between individuals in relation to the meaning of symbols. This perspective attempt to explore the changing meanings attached to

family. Interactionists argue that families reinforce and rejuvenate bonds through symbolic mechanism rituals like family meals and holidays.

Postmodernists hold that unlike modern societies with predictable orderly structures, such as nuclear family, postmodern society is more diverse, family structures are varied. Individuals in postmodern society have much more freedom to choose their lifestyles, personal relationships and family arrangements. Ronald Fletcher in his book *The Family and Marriage in Britain* (1966) holds that the family has benefited from shedding burdensome peripheral functions and from better access to divorce. Late-Modernists like Anthony Giddens argue that although people have more freedom, there still exists a structure that shape their decisions. Moreover, the contemporary feminists criticise Postmodernism by maintaining that in most cases traditional gender roles which disadvantage women still remain the norm. Feminism has different voices, some demand equality with men – men taking more part in childcare and domestic life, and also giving up their domination in the public sphere. Some others pursue the re-evaluation of women's skills and 'womanly' virtues and replacement of 'male' aggression and competitiveness with 'female' nurturance, caring and interdependence.

From the above theoretical backdrop, it can be understood that like any other institution, the family changes according to the needs of the society. Theorists may analyse these changes from different perspectives, but it is true that people continue to look for the better family conditions for more comfortable living. However, it is also true that the concept of comfortable living does vary from society to society and it is structured as per the social values and norms of a particular society.

Recent Research Reports on impact of Lockdown on the family

The recent peculiar situation of pandemic and the nationwide lockdown has forced people to experience a completely new social reality and new form of family life as well as new family relationships. Let us, now, discuss how different studies show the changes taking place in family life during this abnormal situation.

The Daily Mirror (12th April, 2020) published a study in Britain that found the lifestyle in Britain has changed as during this period, families are eating together and they are also eating earlier than before. Their eating habits have also changed as each day is a holiday like Sunday and they are ordering more desserts nowadays. The Managing director of Just Eat feels that people are trying to retain normality with their favourite takeaway. This study implies that an unusual habit of eating together helped the families in Britain to strengthen themselves to fight against the fear of Corona virus.

The Print (5th April, 2020) attempted to understand whether coronavirus lockdown in India is leading to stress in families or strengthening relationships. It shows that people are working from home, thus getting the chance to spend more time with the family. Working people enjoyed staying at home, not to travel every day and having the comfort and safety of house and parents. This period of lockdown has given ample opportunity to spend quality time with the loved ones within the family, to help the children with their studies, watch movies and programmes together, participating in cooking experiments, and establishing better understanding through something as mundane as shared chores. Through these activities people do realise what they miss out in the usual rush of rat race.

However this situation is enjoyed only by the privileged ones, many people like migrant labourers are struggling hard to come back to the safe and comfortable zone of their home. Still the importance of family in the crisis can be understood from their urge to return to their families.

Dr. V. Kumar in his article (30.05.2020) also emphasized on the positive impact of the lockdown on the family. He felt that though the families are forced to spend endless time together, through this they realise the value of family. He found that spousal relations have been rekindled and bonds with the parents are rejuvenated. Household chores are shared among the family members. Cooking has acquired a newfound status in Indian urban households.

An article in *The Guardian* (23.04.2020) also emphasises the opportunity to talk together has the potentiality to solve relationship problems and this lockdown period has given that chance to people.

The Print also found some negative impact of lockdown on the family. During this period domestic violence is on the rise in many families. They find that more people in China are filing for divorce. Due to pay cut many people are going through financial crisis. Moreover in the absence of house helps women in the family are more burdened.

Sam Pathakay, AFP (17.04.2020) reported that The National Commission for Women said the number of domestic violence cases in the country has continued to increase in the month of April amid the countrywide lockdown. Women's organisation had received 587 distress calls or complaints between March 23 and April 16. Out of these, 239 cases were related to domestic violence. During the earlier period of February 27 to March 22, the National Commission of Women had received 396 reports of offences against women, of which 123 were domestic

violence cases. In March, the United Nations had observed that the combination of economic and social stresses because of the pandemic, along with other lockdown measures, have dramatically increased the number of women facing domestic abuse, as self-quarantine puts them in perpetual proximity with their abusers. In India too, norms of social distancing and stay-at-home orders have fuelled incidents of domestic violence. On April 10, the NCW launched an emergency number on WhatsApp for women to register emergency complaints. Within a week, the commission received 40 messages alleging forms of domestic violence.

Findings of the study

All the respondents under this present study live in urban households, near Kolkata, but some of their close family members like their parents and siblings live in semi urban and rural areas. Some do have responsibilities to look after them, whereas some do not have to take regular responsibilities as such for their close relatives. But, all of the respondents are really anxious about their family members living at a distant place, as they cannot visit them like before. However, phone calls—both audio and video, are helping them to receive and convey messages to them and reduce the enforced physical and social distance. Still some feel telephone is not enough to communicate with the near and dear ones, especially with the aged parents who are not so comfortable with telephone conversation. This indicates that although people live in nuclear households, with spouse only or spouse and children, or sometimes also with parents of the husband or rarely of the wife, they still have a connection with other close relatives. This bond is felt more intensely during this crisis period of lockdown—when people are

forced to stay inside home, and it is almost impossible to visit the places of their loved ones.

Though none of the respondents or their immediate family members suffered from Covid 19, two relatives of two of the respondents were detected Covid 19 positive. This definitely created a severe psychological pressure on both of the respondents and their family members. The acuteness of the problem lied in the fact that nobody is allowed to meet the Covid patient - the family bindings seem to be meaningless here. Though both the relatives were cured, the patients and the family members went through tremendous mental pressure and fear. The aged parents of one respondent also fell ill, though fortunately were not Covid positive. However, this too made the respondent and her family to undergo fear of uncertainty and lots of stress as the treatment of other ailments have become more inaccessible during this period. Therefore this is really a hard time for all sorts of patients, both Covid and others, especially for the old people. In such situation only family members can support each other and definitely all the respondents agree that this frightening situation has strengthened the family bonds.

None of the respondents and their family did experience job loss or economic setback. However all of them extended financial help to at least few people, who lost their jobs during this period. 80% of the respondents made full payments to their domestic helpers who could not come for regular work due to the lockdown.

During pre-lockdown period household work was managed mainly by the women in the family as following the patriarchal tradition. Almost 80 percent of the respondents are working women. Though all of them used to have one to three domestic help, they also had to share

household chores. In 40 percent cases husbands of the respondents did not take part in the household work at all. However they used to help in regular purchase and procurement of commodities for household consumption. In other 60 percent of cases the husbands used to help in the household chores, mainly in cleaning the house and washing clothes, both manually and with the help of machines. Very few of them mainly those in the nuclear family helped in cleaning the utensils occasionally, during the absence of the domestic help. None of them contributed significantly in cooking, which was done by the cook, the wife and in some cases the wife and her mother in law. The kitchen has been considered the sole domain of the women, through which they exercise power within home. The legacy is passed on from the mother-in-law to the daughter-in-law. The respondents having mother-in-laws in the same household still follow this norm. Some husbands, especially those in the nuclear family do cook sometimes according to their wish, but that is never on regular basis.

The continuous lockdown and the absence of the domestic helps has changed this scenario to a great extent. Almost all the working respondents and also almost all the husbands are now working from home, which definitely create a burden on the individual as well as the family as a whole, as the home becomes the workplace for the time being and all other members have to be cautious about that. Moreover, now, a huge pressure of household work has been rested on the women. However, the husbands of all the respondents, being at home, are also taking part in domestic work. The husbands who used to do no household work are also doing cleaning, washing and sometimes a few in nuclear family are also cooking some dishes to help their wives. Children, who did not have

to do any domestic work, nowadays are helping the family by cleaning their plates or washing their clothes. Very few among the respondents have to go to their workplace regularly and they help less than others in household work. Thus, it is evident from this that during this lockdown the relationship between the members and the domain of household work has undergone a huge change which definitely has changed the dynamics of relations within the family.

Relationships among the members of the family have been changing to some extent as the family set up is forced to change due to the lockdown. Almost all the members, except those who have to go to their offices at least occasionally or regularly during the first phase of unlock, are staying within the home only. Apart from the official work which they have to perform from home, the members have a lot more time of the day to devote to the family only. They are having more time to share each other's feelings and thoughts, which was not always possible during normal period. Conflicts are also less within the family- as many of the respondents feel the fear and stress of Corona virus has been definitely one reason for this. For example, one of the respondents, who stays with her husband only, says that they used to fight a lot during pre-corona normal time, but now they realise that they both are solely dependent on each other, and if any of them is infected with Covid 19 only the other will be there to protect. Moreover, one respondent in nuclear family believes, "it is also a kind of adjustment we are going through, my husband knows that we have to stay together in this home only, and he cannot escape to his office after a conflict like earlier, so we are adjusting more. Moreover he has a huge pressure of office work from home. My husband possesses the patriarchal values and did not like my professional engagements outside home for

a long time. Now he is happy and feeling secured enough as I am staying at home only. So number of conflicts declined."

Domestic violence as reported by The National Commission for Women is quite alarmingly rising during this period. Perhaps, since most of the respondents under study belong to middle class and mainly are teachers, such events did not occur in these families. However, the women in the families have to undertake more household work, which is definitely very much stressful for them.

The lockdown period has compelled people to discard all their professional, social and entertainment activities outside home. All the respondents are missing their workplace, friends and other social engagements like yoga class etc., travelling, watching movies and for some eating out – all of which had very important role in their everyday life. All the 80 percent of respondents, who are working, are teachers either of school or colleges. All of them missing the classrooms and their beloved students. Although, most of them meet their students through online classes all of them feel that such online meetings do not fulfil the requirements of students neither do they satisfy the teachers. Physical distance and the limited conversations never meet up the necessities of emotional bonding of teacher and student. Thus this situation has definitely hampers the regular professional life of the respondents, which in turn has created some psychological pressure on them. Most of them have a feeling of insecurity as they have been forced to almost stop their regular professional duties at the workplace and mostly engage into domestic chores within home.

Social networking sites – Facebook, WhatsApp etc. are of great help to bridge the gap. All the respondents continue to meet their friends through these systems.

Movies are watched on internet – through Amazon or Netflix etc., but many of them miss travelling with family and friends, a lot. Since these activities act as tension releaser for the individuals, they are indeed very much essential for the wellbeing of the family. The outside world is only virtually not physically accessible to the people, they really miss it and this definitely generate stress and unhappiness among all the respondents. Obviously staying together with the family members for the whole day give some sense of satisfaction, something which was otherwise almost impossible, still the absence of outside activities, pressure of household work together with the anxiety of corona virus make all the respondents mentally depressed to some extent.

Children are also getting time to talk to their parents and grandparents as now, they no longer have to go to school, tuitions or other classes for co-curricular activities. All are having home-made healthy food together, sometimes children are also showing interest in cooking and all these definitely strengthen the family bond. Most of the respondents are satisfied with the online classes that their children are attending, as they believe that the children are also enjoying this new mode of learning. However they are missing summer vacation, which could be enjoyed in their own ways. Now, though they don't have to go to school, there is no vacation – online classes are regularly going on. Moreover, during normal period, children can enjoy holidays by playing with their friends, reading storybooks, watching movies, travelling or just staying inside home. But now they are forced to stay inside home and attend online classes – this definitely make them unhappy. Most of the children, definitely missing their friends and some, mostly boys, even the playground. Parents are also anxious about the addiction of

mobiles for the children of all ages during this period.

Old people in the family of the respondents are also going through hard times as being the high risk group for corona infection, they have to take extra precaution and have to restrict their regular activities, like morning or evening walk, visiting local markets, going to banks etc. Moreover, since in most of the cases domestic helps, attendants are not coming, they, particularly those who stay alone, are really facing lots of problems.

Conclusion

The spread of Covid 19 and the consequent nationwide lockdown by the government has altogether transformed the lives of Indians like in all other countries. The life threatening and easily communicable characteristics of the disease, no medicine to cure the disease or vaccine yet to discover – all these cause great concern and stress among people. Moreover starting from complete lockdown to the phase of unlock-1 in India, we see immense change in different aspects of our life. In this process the family has been undergoing lots of changes, both in its structure and functions.

The sudden disastrous pandemic situation and the lockdown has forced to change the internal role structure of family. The division of labour within most of the families in the patriarchal society in India as found during normal period has been shattered to a great extent. Most of the men and women in the family have to play least professional roles and perform personal roles within family only. In the absence of domestic help the domestic chores become the most essential work during this period. In all the cases under the present study the men perform the domestic work much less than women, who take up the leading role in such household activities. It is found from the study that in the families, particularly

in the joint families under study, the male members used to take little part in the household work. But during this period of lockdown they have started to participate in the domestic work. Whereas, in nuclear families the husbands are participating in the household chores along with their wives more actively. Even the children of the family, who previously did not take part in the domestic work, are also doing some now. The modern structure of family has a very important role of domestic workers and the absence of them forced to change the existing role structure within the family.

In modern society the family has ceased to be a unit of production. Place of work is separated from the family, which remained as a unit of care giving and consumption only. But this lockdown has changed this situation and the concept of 'work from home' has transformed most of the families, though temporarily, into a semi-workplace. All the members get to know the work of others and sometimes also become a passive part of it. The teacher respondents, who take online classes during this period are also able to establish the other side of their personality other than home maker (which is otherwise more prominent within the family), among the family members.

The modern family has changed its traditional functions and due to fast life many outside agencies have taken over many of its functions. Apart from the economic function the educational function of the family has been taken over by public and private agencies like schools, colleges etc. as well as private coaching centres. However, during this lockdown period, the family has to perform the educational function more prominently, as now normal school system as well as private coaching is not in function. Thus family has to restore many of its traditional functions during this period. Now the question arises – how do people

accept this change? Are they willing to bring in these changes in family permanently?

Although staying at home, having meals together, sharing each other's thoughts do strengthen the bonds among the family members, the respondents realise that this basic family structure is not enough for happy living in a modern society, outside world has a very important role to play in maintaining a meaningful family life.

The daily life of the most of the respondents, who are service holders, have changed to a great extent. They do not have to travel to their workplace now, can stay comfortably at home with all the family members, even the male members are extending help to domestic chores. However, they still do not want such change for permanent. Even though Feminism demands equality of men and women, men taking more active part in domestic work and childcare – Indian reality is somewhat different- even the highly educated women in the family are yet to accept men as doing household work equally as women do. Six of the respondents opine that women can do the household work as well as rearing of children better than men, as most men are not trained in such work. This is why these respondents feel that whatever little household work the men are doing during the lockdown period can be considered enough for them. However, perhaps, as most of the respondents belong to the middle class, more or less conservative families and 80% are teachers of schools and colleges, the respondents expressed more conservative patriarchal values. Most of the respondents believe that the domain of household chores belongs mainly to women and many of them do not want to give way the authority of this domain to men. Thus they want to retain men's traditional image of breadwinner of the family, whereas women even when work outside, the main role of her remain the home maker's or care

giver's role. This means that, though the modern Indian women do exercise more freedom, they still place more importance on the traditional patriarchal values which are instilled in them by the society around them. Therefore such temporary change in the role structure in family may not persist and bring inequality among genders within family in near future, at least in middle class conservative families.

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Recommended Laboratory Methods Currently Applied to Test SARS-CoV-2 in COVID-19

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Abstract

COVID-19 has taken the major public attention for the last one year when it becomes a pandemic because its high intra-human infectivity rate and lack of sufficient knowledge, protective measures at initial time. Various diagnostic methods are commonly used which can be classified into two categories based on the substrate of detection. Direct tests detect viral nucleic acid, viral antigens and indirect tests identify the presence of antibodies which are normally raised after patient's immune system react with the virus for defence. Real time reverse transcriptase PCR is appeared to be the most reliable method to detect SARS-CoV2 infection in early stage of infection. Time saving rapid antigen test is useful in the present situation but suffers large proportion of false negative as well as false positive results. Low viral load is mostly responsible for false negative results. False positive results also can arise due to cross reactivity of other common cold causing viral antigens to the SARS-CoV-2 specific antibodies. Application of both these two tests sounds more realistic to get appropriate results. Antibody detection using several serological studies can't be applied during early stage of infection but it is a promising tool to assess COVID-19 infectivity within a population as a whole. Analysis of COVID-19 data during initial months of pandemic based on serological test was not reliable to conclude about the scenario of a population as very low proportion of population is initially infected. Serological test also suffers high proportion of false negative results in the initial days of pandemic due to inadequate antibody titre in the patient's blood and lack of standardization of the method.

Introduction

Method of detection is critical to combat diseases and its accuracy becomes important when battled with newly emerged and highly infective microbes. The rapid trans-human transmission of severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) has led corona virus disease 2019 (COVID-19) to spread worldwide within three months or so from place of origin (www.worldmeter.info/coronavirus, 2020). Hundreds of diagnostic tests have now been developed, and technical reviews of their comparative performance

assessment have been published recently (Bohn et al., 2020; Cheng, Yansouni, et al., 2020; Lee, Lin, Renia, & Ng, 2020; Lippi & Plebani, 2020; Montesinos et al., 2020; Younes et al., 2020). Very recently, the Journal of Clinical Microbiology dedicated nearly an entire issue to COVID19 testing (McAdam, 2020).

Corona virus is a RNA virus, zoonotic, can infect birds and mammals other than human. The first study on corona viruses was reported in 1931, while the first human corona viruses were identified in the 1960s (Weiss, 2020). HCoV-229E and

HCoV-OC43 were discovered as responsible viruses for some cases of cold and respiratory tract infection (Kahn & McIntosh, 2005). Third human corona virus was identified as SARS associated corona virus (SARS-CoV) in March 2003 (Rota et al., 2003). New human corona viruses HCoVNL63 and HCoV-HKU1 was reported in 2004 in the Netherlands and in 2005 respectively (van der Hoek et al., 2004; Woo, Lau, Yip, Huang, & Yuen, 2009). The sixth human corona virus was emerged in the Middle East in 2012 and named Middle East respiratory syndrome CoV (MERS-CoV), capable of infect humans and dromedary camels (Chan et al., 2015). The last human corona virus appeared in December 2019 in Wuhan, China, which was named 2019 novel corona virus (2019-nCoV) by the World Health Organization (WHO) and then renamed to severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), due to its similarity to SARS-CoV (Chang, Yan, & Wang, 2020). Also, WHO named the related disease as corona virus disease 2019 (COVID-19). About 107838255 laboratory-confirmed cases around the world and 2373398 confirmed deaths have been reported until 13th February 2021 (World Health Organization, 2020b).

Due to the rapid spread of COVID-19,

a reliable detection method is needed for patient diagnosis and tracking worldwide, especially in the early stages of the disease, to slow and try to control the pandemic (Figure 1). WHO has recommended nucleic acid amplification tests (NAAT), such as reverse transcription polymerase chain reaction (RT-PCR), for this purpose (World Health Organization, 2020a). Furthermore, except chest CT-imaging and host antibody detection (serological assays) that have been used for diagnosis purposes, there are other methods for SARS-CoV-2 direct detection, such as RTLAMP, viral RNA biosensing, and viral protein biosensors (Qiu et al., 2020; Seo et al., 2020; W. Yang et al., 2020; W. Zhang et al., 2020). CRISPR-mediated detection or loop mediated isothermal amplification, have also been applied (Huang et al., 2020; Kitagawa et al., 2020). Rapid antigen detection tests have been developed to detect active infection, although a limited number of such tests are available (Lambert-Niclot et al., 2020; Nagura-Ikeda et al., 2020). However, in comparison with rt-PCR, rapid antigen detection tests lack sensitivity, and owing to the increased risk of false negative results, they are considered as an adjunct to rt-PCR tests (Mak et al., 2020; Mertens et al., 2020).

Table 1. Various diagnostic methods are given according to the time of introduction in SARS-CoV2 testing. Source: (Shabani, Dowlatsahi, & Abdekhodaie, 2021) doi:10.1007/s10096-020-04001-8

Year of introduction	Human corona viruses	Diagnostic methods introduced
2001	HCoV-229E, HCoV-OC43	RT PCR (research)
2003	SARS CoV	RT PCR & rRT PCR (clinical)
2004	SARS CoV	antigen detection (research)
2005	HCoV-229E HCoV-OC43 HCoV NL63 HCoV-HKU1 SARS CoV	antigen detection (research) antigen detection & rRT PCR (research) RT PCR & rRT PCR (clinical) RT PCR (clinical) RNA based biosensor (research)
2006	HCoV-HKU1	rRT PCR (clinical)
2011	HCoVNL63	RT-LAMP (research)
2012	MERS-CoV	rRT PCR (clinical)

Year of introduction	Human corona viruses	Diagnostic methods introduced
2013	MERS-CoV	RT-RPA (research)
2014	MERS-CoV	RT-LAMP (research)
2015	MERS-CoV	antigen detection (research)
2016	MERS-CoV	RNA based biosensor (research)
2017	HCoV-OC43 MERS-CoV	RT-RPA (research) rRT iiPCR (research)
2019	SARS CoV	RT-LAMP (research)
2020	SARS CoV2	RT PCR & rRT PCR, antigen detection (clinical), RT-LAMP & RNA based biosensor (research)

The severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) and its associated Corona virus disease 2019 (COVID-19) pandemic has demanded rapid up scaling of *in vitro* diagnostic assays to enable mass screening and testing of high-risk groups, and simultaneous ascertainment of robust data on past SARS-CoV-2 exposure at an individual and population level. To meet the exponential demand in testing, there has been an accelerated development of both molecular and serological assays across a plethora of platforms. In the present review, we discuss the current literature on these modalities including the nucleic acid amplification tests, direct viral antigen tests and the rapidly expanding laboratory based and point of care serological tests. It should be noted that the technical point of view was selected in the article to introduce the potentially applicable techniques which are recommended and low cost methods for fighting against COVID-19 pandemic.

Sample collection

The importance and variability of specimen collection was initially highlighted on comparison of the positive rates of pharyngeal, nasal, blood, sputum, faeces, urine, bronco-alveolar fluid and fibro bronchoscope brush biopsy of patients with confirmed COVID-19 (L. Zou et al., 2020). At present the Centre for Disease Control (CDC) in the United States recommend

collecting and testing an upper respiratory with a nasopharyngeal sample for swab-based SARS-CoV-2 testing. When collection of a nasopharyngeal swab is not possible; an oropharyngeal specimen, a nasal mid-turbinate (using a flocked tapered swab), an anterior nares (nasal swab) specimen (using a flocked or spun polyester swab) or a nasopharyngeal wash/aspirate or nasal aspirate sample can be taken. Although detected in other samples like blood and stools these were generally less reliable than from respiratory samples.

At present it is recommended that specimens should be collected as soon as possible once a decision has been made to pursue SARS-CoV-2 testing, regardless of the time of symptom onset. The viral load in throat swabs is greatest at the time of viral onset and decrease monotonically thereafter (To et al., 2020; Zou, Bretin, & Gewirtz, 2020). Analysis of these temporal dynamics suggests that viral shedding may begin 2 to 3 days before the appearance of the first symptoms facilitating pre-symptomatic or asymptomatic transmission (He et al., 2020).

Medical diagnosis

The database held by the Foundation for Innovative New Diagnostics, which is the WHO Collaborating Centre for Laboratory Strengthening and Diagnostic Technology Evaluation, on the 22 May 2019 contained 560 SARS-CoV-2 laboratory tests for the

diagnosis of COVID-19. This comprises 273 molecular assays and 287 immunoassays. There are principally two types of tests available for COVID19; viral tests and antibody tests. The viral tests are direct tests as they are designed to detect the virus and therefore reflect current infection. In contrast, the antibody tests are indirect tests, as they do not detect the virus, but rather ascertain established sero-conversion to previous infection, or early seroconversion to ongoing infection.

Direct methods

Nucleic acid based detection methods

Usually, this newly identified corona virus has an incubation period of 2-7 days, and there are no obvious symptoms that are observed during the incubation period (Guan et al., 2020). However, the virus is contagious and can spread from an infected person to a non-infected person during the incubation period. Nucleic acid (NA) testing is reported to be essential for the confirmation of SARS-CoV-2 infection.

Whole-genome sequencing

It is one of the most comprehensive approaches for the identification of the viral nucleic acids. The first complete SARS-CoV-2 genome sequence was uploaded on GenBank (accession number MN908947) by Zhang et al. on January 5, 2020 (Phan, 2020). Five typical open reading frames (ORFs) were identified in the SARS-CoV-2 genome: ORF1ab polyprotein (7096 amino acids), spike glycoprotein (1273 amino acids), envelope protein (75 amino acids), membrane protein (222 amino acids), and nucleocapsid protein (419 amino acids). As of February 6, 2020, 19 other genome sequences of SARS-CoV-2 obtained by using Illumina or Nanopore platforms were also uploaded on GenBank (Chan et al., 2020; Chen et al., 2020). As whole-genome

sequencing is relatively expensive, time consuming, and complicated, it is unsuited for urgent and large-scale testing.

RNA amplification-based detection methods

Most of the viral RNA detection methods work based on nucleic acids amplification. To do so the complementary DNA (cDNA) of the target must be formed. Therefore, reverse transcription of the extracted target RNA is used to form the cDNA is the first step in the RNA amplification-based detection methods (Gill & Ghaemi, 2008). In the initially presented methods, the target cDNA was detected after the end of the amplification step. The fluorescence signal, which represents the copy number of the target sequence, can be detected during the amplification process. Later the real-time detection methods were developed where amplification and detection steps were merged. There are some highly sensitive methods were also proposed to directly detect the target RNA without amplification (Craw & Balachandran, 2012; Jalali, Saldanha, & Jalali, 2017).

Reverse transcription PCR (RT-PCR)

This technique was developed for specific RNA detection. In this method, the target RNA is converted to cDNA by the reverse transcriptase enzyme. Then, the obtained cDNA is amplified by PCR. In the traditional RT-PCR detection methods, the detection step is performed separately after the amplification step. Thereafter, the amplification and detection steps have been combined together to decrease the total detection time and increase the sensitivity and accuracy of the method. This technique is known as real-time RT-PCR (rRT-PCR) or quantitative RT-PCR (qRT-PCR). This is the most popular testing method for the detection of SARS-CoV-2.

In this method, the SARS-CoV-2 RNA is first reverse transcribed into cDNA, and specific gene fragments within the cDNA are amplified using target specific primers. The U.S. Centres for Disease Control and Prevention (CDC) recommended to use 2019-nCoV_N1, 2019-nCoV_N2, and 2019-nCoV_N3 primers and probes that target the nucleocapsid gene (Centers for Disease Control and Prevention, 2019). WHO have provided primers for the genes which encode the structural proteins of the viral envelope (E) and the nucleocapsid (N), and for the RNA-dependent RNA polymerase (RdRp), which is a key part of the virus's replication machinery that makes copies of its RNA genome (Corman et al., 2020).

Corona virus detection based on the RT-PCR was introduced in 2001. Here an RT-PCR assay for HCoV-229E and HCoV-OC43 was conducted and subsequently agarose gel electrophoresis and DNA enzyme immunoassay were applied for the detection of PCR products. 348 sputum and nasal aspirate samples were tested that could detect 0.05 median tissue culture infectious dose (TCID₅₀)/ml of HCoV-229E and 0.01 TCID₅₀/ml of HCoV-OC43 (Vabret et al., 2001). In later years 2028 clinical nasal specimens for HCoV-229E were detected by the RT-PCR method. The RT-PCR products (amplicon) were detected by a DNA enzyme immunoassay, which used a horseradish peroxidase (HRP)-labelled anti-double-stranded DNA to detect DNA hybridization. Their large-scale experiments showed 0.5 TCID₅₀/ml detection limit, and the total detection time of each test was about 10 h (Vallet et al., 2004). In 2007, Lam and teammates used a fast thermo-cycler and developed a multiplex RT-PCR for the detection of 21 respiratory viruses consisting of SARS-CoV, HCoV-OC43, and HCoV-229E. They tested 303 nasal aspirate samples, and the amplicon was detected by agarose gel elec-

trophoresis. The total detection time was about 5 h and the limit of detection (LOD) was 10 copies/reaction for all the three corona viruses (Lam et al., 2007).

Real-time RT-PCR (rRT-PCR)

After the development of fluorescent DNA labelling technique, real-time RT-PCR emerged. In this method double stranded cDNA molecules, generated by PCR amplification, binds with fluorescent dye and with increasing copy number the emitted fluorescent light increased. SYBR Green dye is a non-specific DNA label that is widely used in rRT-PCR detection. SYBR Green binds to any double strand DNA and light is emitted after binding. In clinical diagnosis, there have been some false-positive results due to the binding of SYBR Green dye to primer-dimers or other DNA double strands in the mixture (Freeman, Walker, & Vrana, 1999; Jalali et al., 2017). To resolve this problem, specific fluorescent probes, also known as reporters were developed, which only worked in the presence of a specific DNA sequence. The most common specific probe is the TaqMan probe, and methods based on this probe have been recommended as the standard diagnostic protocol for SARS-CoV-2 detection by WHO (Corman V, 2020). In this method, fluorescence resonance energy transfer (FRET) is exploited and a fluorescent dye molecule and a quencher attached to 5' end and 3' end of the oligonucleotides. The quencher and fluorescent components are closed in the same molecule at first, and light emission is prevented (Figure 2). After cDNA amplification, the probe is hybridized to the specific sequence of single-stranded cDNA. In the extension step of PCR, the hybridized probe is split. Thus, the fluorescent and quencher components are separated which results in the increase of fluorescent intensity (Jothikumar, Hill, & Narayanan, 2009).

Corman and co-workers developed an rRT-PCR assay for the detection of SARS-CoV-2 in 2020. This TaqMan-based assay was used for SARS-CoV detection either, and the LOD of the assay was 2.9 and 3.2 copies/reaction for SARS-CoV-2 and SARS-CoV, respectively (Corman et al., 2020). The

recommended WHO protocol for SARS-CoV-2 detection is the rRT-PCR method with TaqMan probe which has been widely used for COVID-19 diagnosis worldwide. This assay is performed more than 1,000,000 tests per day for the time being (Corman V, 2020; www.worldmeter.info/coronavirus, 2020).

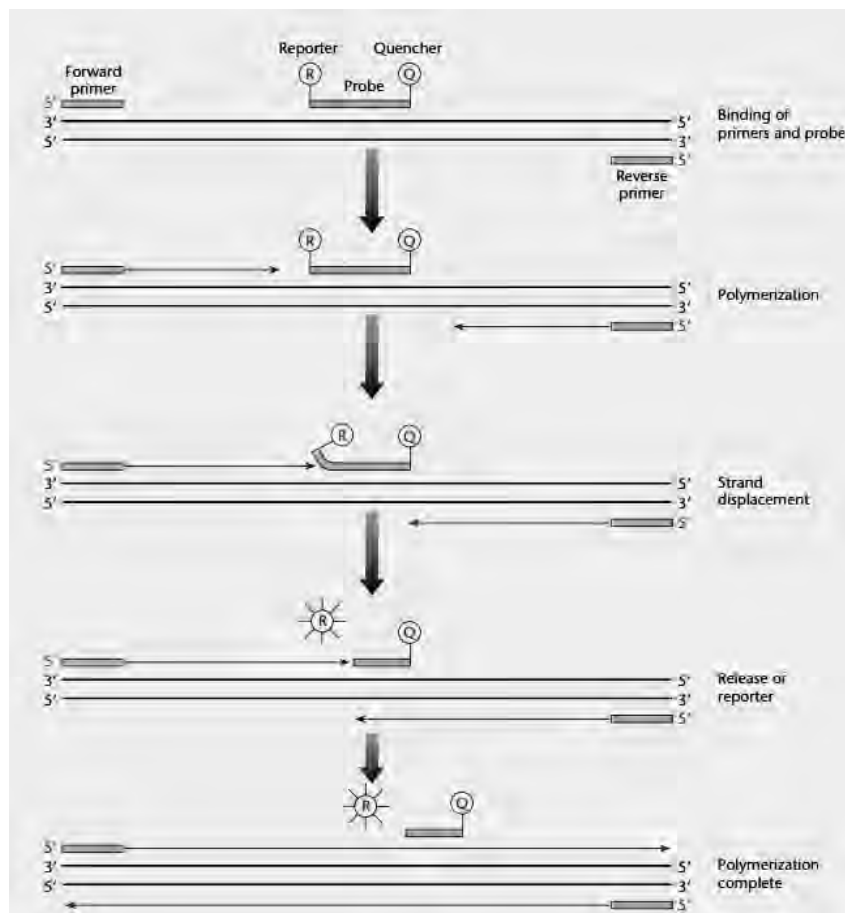


Figure 2. Working principle of real time PCR (TaqMan probe). Source: (Primrose & Twyman, 2013)

Currently, besides the WHO's suggested protocol, several other commercial rRT-PCR assays with the United States Food and Drug Association (FDA). The Allplex™2019-nCoV diagnostic kit (Seegene Inc., Seoul, South Korea), for instance, is an assay that concurrently detects three SARS-CoV-2-associated genes in a single tube, i.e., E, N, and RNA

dependent RNA polymerase (RdRP), using FAM, Quasar®670, and CAL Fluor® Red 610 fluorophore probes, respectively. Human nasopharyngeal, oropharyngeal, or anterior nasal swabs, mid-turbinate, and sputum specimens from COVID-19 suspects may be used as sources of these nucleic acids, and the results will be available within 1 h

and 50 min after RNA extraction (Seegene Inc, 2020). cobas® SARS-CoV-2 test (Roche, Basel, Switzerland) is another rRT-PCR assay that simultaneously targets and detects two SARS-CoV-2-associated nucleic acids in nasopharyngeal or oropharyngeal swab specimens, producing virtually 96 results within 3 h, an overall of 384 or 1056 results for the cobas® 6800 or 8800 System in approximately 8 h, respectively. The LOD of this detection kit has been reported as 0.009 and 0.003 TCID₅₀/ml for ORF1a and E genes, respectively (Roche, 2020).

Nevertheless, the RT-PCR method is a relatively expensive and time-consuming technique and needs an expert technician, as well as specialized equipment compared to other diagnostic methods. It has also shown some false-negative results (even more than 30%) in COVID-19 diagnosis compare to chest CT imaging technique results (Fang et al., 2020). Real-time RT-PCR is specific, rapid, and economical; however, by using this approach we cannot precisely analyze the nucleic acid sequence of the amplified gene fragments, and thus all the target fragments that are

successfully amplified are considered to be positive. In addition to these limitations, sample preparation, laboratory conditions, and technical errors can lead to false-negative results. Also, several reports have revealed false-negative results obtained by using real-time RT-PCR kits. Besides, testing for viral nucleic acids using this method must be carried out only by experienced technicians in qualified laboratories, making its practical applications by clinicians limited.

Whole virus detection

Enzyme Linked Immuno-Sorbent Assay (ELISA) technique has been employed in whole virus detection by targeting viral spike proteins. An assay for SARS-related corona virus detection exploited anti-S1 monoclonal capture antibodies, as well as HRP-labelled bi-specific monoclonal detection antibodies to detect the S1 subunits of spike proteins by the addition of 3,3',5,5'-Tetramethylbenzidine (TMB) chromogenic substrate (Figure 3). This method detected as low as 19 ng/ml in approximately 2 h (Sunwoo et al., 2013).

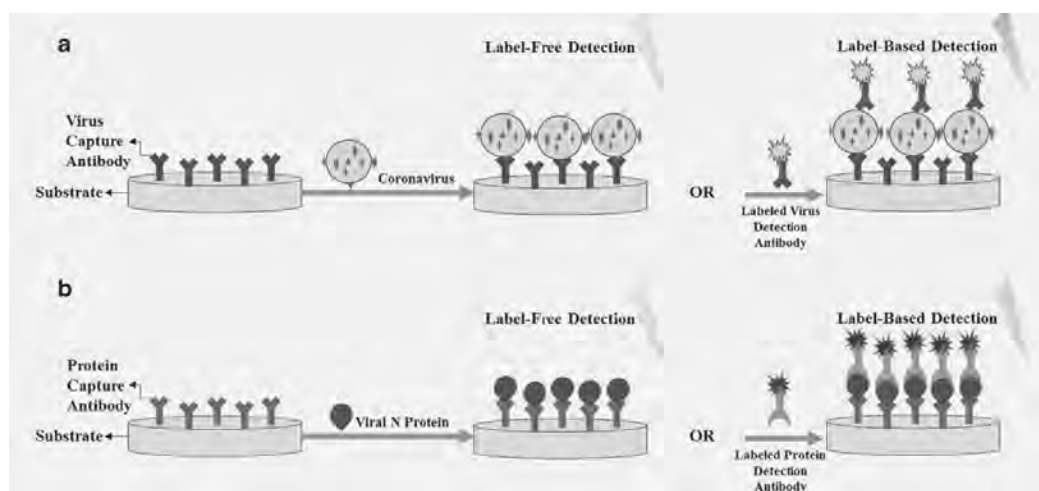


Figure 3. Principle of detection of a whole virus and viral N protein as applied for corona viruses detection. Source: (Shabani et al., 2021) doi:10.1007/s10096-020-04001-8

Viral N protein detection

ELISA technique has also been extensively used for SARS- and MERS-CoV N protein detection. In a study, an ELISA was designed to identify SARS-specific N proteins in nasopharyngeal aspirate and serum samples within 3 h and 31 min (Lau et al., 2004). The proteins were first captured by guinea pig anti-N protein antibodies coated on immunoplates. Then, rabbit anti N protein antibodies were introduced to form the sandwich-like structures. After the addition of HRP-tagged goat anti rabbit antibodies, detection was carried out by incubating the plates with TMB substrate. The method observed detection limits of 2.5 ng/ml and 0.4 ng/ml for nasopharyngeal aspirate and urine specimens, respectively.

Rapid diagnostic test conducted against COVID-19 Ag Respi-Strip (Coris BioConcept, Gembloux, Belgium), for detection of the SARS-CoV-2 antigen in nasopharyngeal secretions. The assay is ready to use and based on a nitrocellulose membrane technology with colloidal gold nano particles sensitized with monoclonal antibodies directed against highly conserved SARS-CoV-2 nucleoprotein antigens.

The first FDA-approved corona virus-associated antigen detection assay was introduced on the 10th of May, 2020 as a means to rapidly diagnose COVID-19 (Shabani et al., 2021). The Sofia SARS Antigen FIA (Quidel Corp., San Diego, California, USA) is a fluorescence-based sandwich LFIA that enables the qualitative detection of the SARS-CoV and SARS-CoV-2 N proteins from nasopharyngeal and nasal swabs within 15 min. Nevertheless, the test cannot distinguish between the two viruses. This assay has observed an LOD of 113 TCID₅₀/ml, with a clinical sensitivity and specificity of 80% and 100%, respectively (Mettler, 2020; Quidel Corp, 2020).

The non-governmental organization FIND have listed four CE-marked rapid SARS-CoV-2 antigen detection tests, which are primarily lateral flow immune chromatographic assays based on the presence of a colloid gold conjugate pad and a membrane strip pre-coated with antibodies specific to SARS-CoV-2 antigens on a test line. If SARS-CoV-2 antigens are present in the specimen withdrawn from a nasopharyngeal swab, a visible band appears on the test line as antibody-antigen-antibody gold conjugate complex forms.

The principal concern about this testing is false negative rate due to either a low or variable viral load. Latter having the potential to further compound cases with low viral titres thereby increasing the false negative rate (Tang, Schmitz, Persing, & Stratton, 2020). The sensitivity of these direct antigen tests is lower than RT-PCR, with previous antigen detecting ELISAs developed for SARS-CoV having limits of detection of 50 pg/ml (Che et al., 2004; Di et al., 2005). Furthermore, clarification of their specificity for SARS-CoV-2 is awaited, given the potential for cross-reaction with other human corona viruses. Despite these limitations, the chief advantages of antigen tests including their rapidity (10-30 mins compared to hours for NAAT testing), ease of interpretation and the limited technical skill and infrastructure required as compared to the NAAT based testing, continue to make them worth pursuing.

Two ELISA kits based on SARS-CoV-2 nucleocapsid protein (rN) and spike protein (rS) were used for detecting IgM and IgG antibodies, and their diagnostic feasibility was evaluated (Liu et al., 2020). 68.2% and 70.1% were successfully diagnosed with the rN-based IgM and IgG ELISAs, respectively; 77.1% and 74.3% were successfully diagnosed with the rS-based IgM and IgG ELISAs, respectively. The positive rates

of the rN-based and rS-based ELISAs for antibody (IgM and/or IgG) detection were 80.4% and 82.2%, respectively. The sensitivity of the rS-based ELISA for IgM detection was significantly higher than that of the rN-based ELISA.

Indirect testing: serological tests

Antibody tests require identification of distinct proteins that form the viral coat, with elucidation of which proteins are most divergent from previous corona virus proteins; then identification of specific antibodies to these proteins that are part of the acquired immune response to viral exposure, and finally testing to ensure that there is limited cross reactivity with antibodies developed to other historical corona viruses (La Marca et al., 2020).

Antibody testing can have a mostly complementary role to rtPCR tests in the diagnosis of COVID19, at approximately 10 days or more after the onset of symptoms, in assessing past infections and defining the dynamics of the individual humoral responses in individual patients or in patient cohorts undergoing certain forms of treatment (Caini et al., 2020; Siracusano, Pastori, & Lopalco, 2020). Immune based assays, such as lateral flow assays, are usually designed for detecting human IgA, IgM and/or IgG antibodies or virus antigens (Ong, de Man, Lindeboom, & Koeleman, 2020; Van Elslande et al., 2020). Targets for the tests have been identified by comparative screening for genomic regions that have a low mutation frequency to avoid primer and antibody mismatches, and enhance test quality and stability (Peñarrubia et al., 2020).

Different methodologies were developed including ELISA, chemiluminescence, western blot, protein microarray, and immunofluorescence platforms. With only ELISA and chemiluminescence deemed suitable for clinical application because of

costs, time-to-results, relative simplicity and ability to scale to very large throughput. It is these platforms which are once again being examined for detection of antibodies to SARS-CoV-2.

The most comprehensive study to date of sero-conversion assessed 173 patients affected by COVID-19 utilizing an assay developed to detect antibodies against the receptor binding domain (RBD) of the spike protein of SARS-CoV-2 (Zhao et al., 2020). The median sero-conversion time of total Ab, IgM and IgG antibodies was 11, 12 and 14 days respectively (Rongqing et al., 2020). The respective seroconversion rates for total Ab, IgM and IgG were 93.1%, 82.7% and 64.7% (Rongqing et al., 2020), with the cumulative seroconversion curve suggesting that the rate for total Ab and IgM reached 100% 30 days after the onset. These studies have also highlighted the temporal nature of testing. As despite all patients being subsequently confirmed as COVID-19 positive, in the early phase of illness (within 7-day since onset), the NATT test only exhibited 66.7% sensitivity with the antibody assays even lower with a positive rate of 38.3% (Zhao et al., 2020). However, the sensitivity of Ab overtook that of RNA test since day 8 after symptom onset and reached over 90% across day 12 after onset. Among samples from patients in later phase (day 15-39 since onset), the sensitivities of total Ab, IgM and IgG were 100.0%, 94.3% and 79.8%, respectively. In contrast, RNA was only detectable in 45.5% of samples of day 15-39. In a separate small series of nine cases, seroconversion was occurred after 7 days in 50% of patients (14 days in all) but was not followed by a rapid decline in viral load (Wolfel et al., 2020). Analysis of 285 patients would further support IgG seroconversion within 19 days after symptom onset (Long et al., 2020). Collectively this data suggests that there

is a role for both tests depending on where the patient is on their infection journey, with the combined use of NATT and Ab tests markedly improving the sensitivity of a pathogenic-diagnosis for COVID-19 patients in different phases.

Appropriate thresholds for sensitivity and specificity of an antibody test depend on its purpose and must be considered prior to implementation. For diagnosis in symptomatic patients, high sensitivity is required (generally $\geq 90\%$). UK Medicines and Healthcare products Regulatory Agency set a minimum 98% specificity threshold for lateral flow immunoassays (LFIAs). This is particularly challenging, particularly given the scale of validation study required for a suitable candidate LFIA as to demonstrate a high specificity if the true underlying value was 98%, 1000 negative controls would be required to estimate the specificity of an assay to $\pm 1\%$ with approximately 90% power (La Marca et al., 2020).

Most serological studies were conducted in China, with only a few coming from western countries. The overall sensitivity ranged from 0% to 100% and the specificity from 78% to 100%, with performance highly time sensitive reflecting the dynamics of seroconversion. In general, most assays performed better shortly after initial symptom resolution, accepting the very limited time frames evaluated for all studies to date. In an evaluation of nine commercially available SARS-CoV-2 immunoassays the sensitivities varied the duration of disease: early phase, 7 to 13 days after the onset of disease symptoms (sensitivities ranged from 40 to 86%); middle phase, 14 to 20 days after the onset of disease symptoms (sensitivities ranged from 67 to 100%); and late phase, 15–21 days after the onset of disease symptoms (sensitivities ranged from 78 to 89%) (Lassauniere et al., 2020).

Six recombinant HCoV-19 nucleocapsid and spike proteins were prepared and evaluated by GICA strip (gold immunochromatography assay GICA) to detect total antibodies (IgM and IgG) against HCoV-19. Recombinant HCoV-19 proteins were obtained, including three prokaryotically expressed rN, rN1, rN2 nucleocapsid proteins, and three eukaryotically expressed rS1, rS-RBD, rS-RBD-mFc spike proteins (P. Zhang et al., 2020). The recombinant proteins with the highest ELISA titers (rS1 and rS-RBD-mFc) against coronavirus-specific IgM and IgG were chosen for GICA development. The GICA has a sensitivity and specificity of 86.89% and 99.39% respectively. The eukaryotically-expressed spike proteins (rS1 and rS-RBD-mFc) are more suitable than the prokaryotically expressed nucleocapsid proteins for HCoV-19 serological diagnosis.

Rapid serological tests

Point of care (POC) immunoassays has also been developed for the rapid detection of SARS-CoV-2 antibodies (IgG and IgM). The rapid point-of-care immunoassays are generally lateral flow immunoassays (LFIA) (Li et al., 2020). In lateral flow assays, a membrane strip is coated with two lines: gold nano particle-antibody conjugates are in one line and bind antibodies in the other. The blood sample from the patient is put on the membrane, and the proteins draw through the membrane strip by capillarity. As it passes the first line, the antigen binds to the gold nano particle-antibody conjugate, and the complex flows together across the membrane. Generally, the rapid assays have a low diagnostic performance when compared to ELISA assays and this is explained not only by the well-known technical differences between the two methodologies but also because of possible low antibody concentrations that

may further contribute to the false negatives observed with the rapid tests (La Marca et al., 2020).

The primary advantage of these tests, like an at home pregnancy test, is to obtain a diagnosis without sending samples to centralized laboratories, thereby enabling communities without the necessary laboratory infrastructure to detect SARS-CoV-2 exposed subjects, use only finger prick testing rather than formal blood draws thereby reducing training requirements and enable clinicians to have a validated test at the bedside. As these devices are cheap to manufacture, store and distribute, provided that a positive antibody test was confirmed to be an accurate surrogate for immunity to infection they would also be able inform decision making. This would be particularly the case as secure confirmation of antibody status would reduce anxiety, provide confidence to allow individuals to relax social distancing measures, and guide policymakers in the staged release of population lock-down, potentially in tandem with digital approaches to contact tracing (La Marca et al., 2020).

In the published studies sensitivity and specificity ranged from 9 to 88.6% and from 88.9 to 91.7%, respectively. The sensitivity of these tests performed in non-Chinese countries was substantially lower than those reported for studies conducted in China. The performance of VivaDiag COVID-19 IgM/IgG Rapid Test was evaluated in 30 cases 7 days (Corman V, 2020; M. S. Tang et al., 2020) after confirmed NAT testing and despite this 5 (16.7%) were negative for both IgG and IgM (Cassaniti et al., 2020). Furthermore, in evaluation of 50 acute patients presenting in the emergency room, the sensitivity of the VivaDiag COVID-19 IgM/IgG Rapid Test was 18.4%, specificity was 91.7%, while NPV was 26.2%, and PPV was 87.5% (Cassaniti et al., 2020).

Validity of serological tests

According to available data, seropositivity prevalence is still low. The prevalence of antibodies to SARS-CoV-2, among a high risk category such as healthcare personnel lies between 1.5 %-21 % with high variance across the countries (Comar et al., 2020; Madsen et al., 2020; Shakiba et al., 2020; Solodky et al., 2020; Wu, Fu, Chen, & Feng, 2020). Large scale sero prevalence studies are ongoing but understanding the background rates is essential for accurate interpretation of diagnostic tests. The potential risk of a test providing false reassurance and release from being sheltered for non immune individuals, can therefore widely based on the underlying sero prevalence and this still assumes antibody-positivity as a correlate of protective immunity, which may be incorrect (La Marca et al., 2020).

Understanding viral and host interactions during acute and convalescent phases are critical to be able to understand both the timing of initial seroconversion after exposure to SARS-CoV-2, and the subsequent duration of antibodies. The data does suggest that seroconversion after exposure to SARS-CoV-2 is very similar to other acute viral infections, with IgG concentration beginning to rise as IgM levels reach a plateau (Figure 4) (La Marca et al., 2020). The onset of symptoms (day 0) usually begins 5 days after infection (-5). At this early stage corresponding to the window or asymptomatic period the viral load could be below the RT-PCR threshold and test may give false negative results. As well as at the end of the disease, when the patient is recovering. The seroconversion usually may be detectable 7 to 14 days after the onset of symptoms; hence in the first 12-20 days after the infection the serological tests are more likely to give false negative results

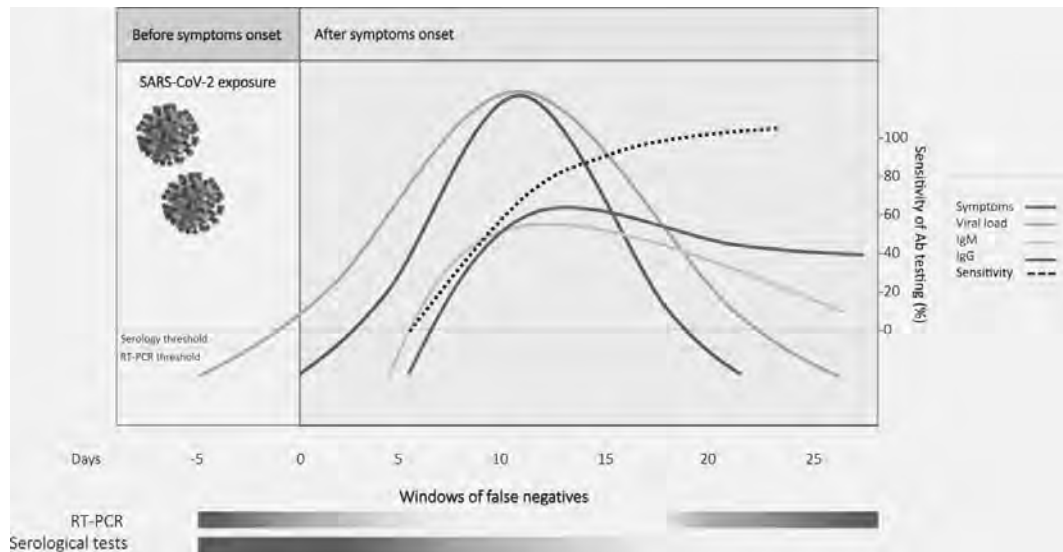


Figure 4. Curves showing onset of COVID19 symptoms, viral load, titre of antibodies in blood and the sensitivity of testing against time (days). Source: (La Marca et al., 2020) <https://doi.org/10.1016/j.rbmo.2020.06.001>

Discussion

Among various methods available for the detection of COVID-19, the RT-PCR is the most reliable and widely used method. During pandemic emergencies, shortage of resources such as PCR kits is common. It is therefore important to have multiple options for the diagnostic methods. Alternative testing platforms and accessories that could be locally manufactured, even in a small scale, are equally important. Such platforms would be appropriate in resource-limited settings as well. The currently practiced RT-PCR methods are costly, and therefore many countries, especially the low income ones, cannot afford enough number of COVID-19 tests to screen larger population. Important gaps remain in screening asymptomatic persons in the incubation phase. Accurate determination of live viral shedding among patients in the convalescence phase to inform de-isolation decisions is also challenging.

Quality assurance and regulatory frameworks surrounding testing remain a challenge. There are several instances of COVID-19 test kits being recalled in several countries due to suspicious quality. The lack of an established reference standard, the use of differing sample collection and preparation methods, and an incomplete understanding of viral dynamics across the time course of infection hamper the rigorous assessment of the diagnostic accuracy of the many newly introduced SARS-CoV-2 assays (Cheng, Papenburg, et al., 2020).

Apart from conventional RT-PCR, additional molecular diagnostic tools are emerging for SARS-CoV-2. Whole-genome sequencing of SARS-CoV-2 has the potential to overcome the limitations of RT-PCR. Genomic sequencing can detect fragments even when a complete genome is not present in the sample. Notably, the SARS-CoV-2 genome is free of repeats, making it susceptible to complete characterization

using short sequence reads. The genome sequencing involves the construction of RNA library, next-generation sequencing (NGS) of the RNA construct, de novo assembly of the quality trimmed reads to generate a contig map, and phylogenetic analysis (Chen et al., 2020). The genome sequencing may overcome the false results arising from specious priming. However, due to cost, technical complexities associated with the instrument, data analysis, and higher turnaround time of 24 to 48 h, this method may not be a routine use for clinical diagnosis during pandemic.

New technologies such as CRISPR-based diagnostics and implementation of practical approaches for POC applications such as RT-LAMP will provide rapid, simple, low-cost, portable, temperature-stable assay systems that are appropriate resource-limited settings, not only for doctor's offices but also for airports, border crossings, and remote locations. One of the research areas to be explored for diagnosis of COVID-19 is to perform the serological assays in microfluidic POC systems. Microfluidic systems offer advantages of small sample volume, miniaturization, portability, multiplexed analyses, and rapid detection and can increase the sensitivity of analyte detection using signal amplification strategies (Giri, Pandey, Neupane, & Ligler, 2016). The application of such a system for the diagnosis of HIV patients was previously reported with sensitivity, specificity, and test time of 92–100%, 79–100%, and 15 min, respectively (Lo et al., 2013). Simple antigen-based immunoassay POC tests and molecular POC system based on paper microfluidics are also promising alternatives. A LAMP-on-paper POC system has been reported for the detection of dengue virus (Lo et al., 2013). A conceptual framework of such a system for COVID diagnosis has already been provided by

Yang et al. (Yang, Wang, Shen, & Cheng, 2020). The integration of smartphones, which are common in most parts of the world, with the POC diagnostic system is promising to read, analyze, and report the assay results. Considering the fact that the possibility of COVID-19 infection will remain in the population like the flu viruses, a multiplex testing method for multiple diseases should be considered as a routine testing platform in future.

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Effects of Covid-19 Pandemic on Global Environment and Proposed Remedies

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Abstract

COVID 19 pandemic caused a havoc reduction in economic activities, but at the same time, the ramping down of human activities imposed a positive impact on the environment. Automobile emission and industrial effluents reduced, which resulted in to clean atmosphere, soil, and water. There are several negative impacts also. Large amounts of disposable medical wastes like PPE, gloves, masks, syringe, etc. generated during this pandemic. Proper disposal and dismantling of these hazardous wastes are required, because, these are the direct source of contamination of Corona virus. Sustainable environmental management is required for economic development and keeps us safe from pollution and all types of contagious diseases. A united effort is desirable for this purpose.

INTRODUCTION

"I have no idea what's awaiting me, or what will happen when this all ends. For the moment I know this: there are sick people and they need curing." This is the quote from the novel 'The Plague' (French: La Peste) by Albert Camus (1947). Oran is a beautiful city of North-Western French Algeria. Dr. Bernard Rieux, a French physician, was practicing at Oran. He lived in an apartment situated at the heart of the city. Michel was the concierge of the building in which Rieux lived. He suffered from a high fever. Rieux tried his best with all types of medicines and treatments but not succeeded. Within a few days, Michel died. Michel was detected plague. Without wasting time, Rieux informed his colleagues of his hospital and also the higher authorities. But nobody paid heed to him. The eighty-bed hospital in Oran was soon filled. People underwent

quarantine. The plague took the form of an epidemic. All entrances to the city were closed. Oran was isolated from other parts of the country.

History does repeat itself. An unknown virus has killed several people in the Chinese city of Wuhan in December, 2019. Doctors involved in the treatment of these patients tried to explain to the government the horrors of this disease. They tried to inform the whole world, but could not. Some of those doctors were missing, and some were imprisoned. But Wuhan city could not be saved. A beautifully decorated modern city soon turned into a city of death. The cause of death was a disease called COVID 19, which is caused by the Coronavirus. Soon, COVID 19 turned from epidemic to pandemic.

More than ninety-five million people are affected by COVID 19 throughout the world so far. More than two million people die,

and more than seventy million people are recovered from this disease throughout the world so far(WM,21.01.2021). More than ten million people were affected in India, out of which 150K died, and more than ten million people recover from this disease(My Gov,2021). The use of non-pharmaceutical measures like wearing face masks and hand gloves, washing hands with soap, frequent use of the antiseptic solution, and maintaining social distance suggest by most of the national and international authorities and medical experts. (Hui et al., 2020; Sajed and Amgain, 2020; WHO, 2020). Vaccination in India has started successfully. But the harm done by COVID19 throughout the world is far-reaching. The economy has collapsed.

More than a third of the global population was under lockdown. With the increase of health and human toll, the economic damage continued and, the world experienced the largest economic shock in decades (World Bank, 2020).

Restricted movement of most of the world population had maintained as a preventive measure of COVID-19, and

it was approximately 1.3 billion in India (which started from March 24, 2020) (Somani et al., 2020). All organizations, including educational institutions, were being closed, except emergency services (e.g., medical, fire, police, food supply, etc.), to encourage people to stay indoors. All the public transports (e.g., bus, truck, train, airplanes, etc.) were suspended, except essential goods and emergency services (Tripathi, 2020). As a result, industrial and transport emissions and effluents have reduced. Is such reduction in emissions reducing the pollution level? Scientists have pointed out both the positive and negative impacts of COVID19 on the environment. Here an attempt has been made to analyze the effects of this pandemic on the natural environment.

STEPS TAKEN AGAINST COVID 19

To control the spread of the virus and reduce the death rate, Government of most of the affected countries initiated to restrict the movement of people to check the spread of corona virus and death due to COVID 19 (Fig. 1).

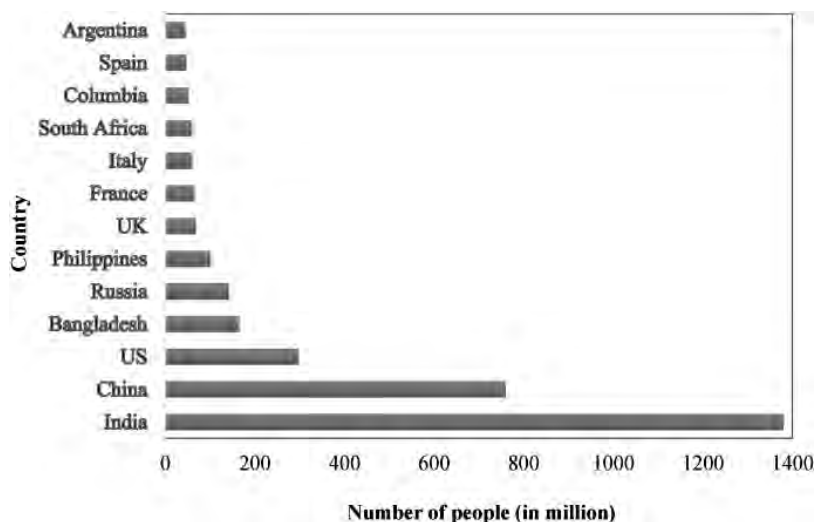


Fig. 1. Number of people placed on enforced lockdown during the outbreak of COVID-19 (Data source: Buchholz, 2020).

It was found, that India restricted the movement of the largest number of people as a preventive measure of COVID-19, which started on March 24, 2020. The most extensive restriction on travelling was placed in Italy, after the Second World War (Cellini et al., 2020). In London, the typically bustling pubs, bars, and theatres have been closed, and people had advised staying home. Nearly 3 billion people were under some form of lockdown globally. The government of most of the country has restricted the movement of people to control the COVID-19 infection. (WEF, 2020).

After the spreading of COVID19 in China, Taiwan set up Central Epidemic Command Centre on January 20, 2020, one day before the first confirmed case. This centre provided a cell phone to quarantined persons and started electronic monitoring. The government compelled the affected person to undergo quarantine by imposing a fine of \$10,000. The government of South Korea sped up testing by introducing a drive-through test. The government has increased the number of the clinic throughout the country. An outbreak of this disease was far higher in Germany and France. But the death rate was comparatively lower than neighbouring European countries. Whereas the UK has fewer cases, the death rate was higher than in these two countries (TOI, 2021). In Germany, it is possible due to proper healthcare systems and mass testing of 100,000 people a day. As a result, France, Spain, and the most affected country Italy have sent their patients to Germany.

Seven strategies are accepted internationally to stop the contamination of this contagious disease. These strategies are: 1. physical distancing 2. contact tracing 3. testing 4. hospital surge capacity 5. PPE supply, 6. clear messaging and 7. act fast (Gavi, 2020).

The Government of India also took some unprecedented steps. Initially, the government suspended all visa, except diplomatic, official, UN/ international organizations, employment, project visa. The government stops all types of international and national flights to reduce the outbreak of this disease. Total Lockdown continued from March 25th to 31st May, 2020.

Due to a violation of lockdown, arrests across the states made. At the same time, e-commerce vendors maintained a seamless supply of essential goods across the country. Indian Railway started special train, initially for essentials commodities and later for the migrant labours. The government classified lockdown areas as "red zone" indicated the presence of infection hotspots, "orange zone" containing some infection, and "green zone" with no-infection. From April 20, 2020, the government announced certain relaxations in different sectors, including banks. Finally, from 1st June 2020, unlock was introduced step by step, and India attains to normalcy. The vaccination program is started on January 16, 2021, successfully, and India able to control COVID 19 by a beautiful understanding and cooperation between centre and states.

EFFECTS OF COVID 19 ON THE ENVIRONMENT

The global situation caused by the COVID-19 has brought about several unexpected effects on the environment and climate. Due to restricted movement and noticeable sluggish social and economic activities, both air and water qualities have improved in different cities, of the world. Besides, increased use of PPE (e.g., face mask, hand gloves, etc.), their indiscriminate disposal, and generation of a huge amount of hospital-wastes create negative impacts on the environment.



Fig. 2. a. Safe medical waste management b. Discarded gloves block the sewer

POSITIVE EFFECTS ON ENVIRONMENT

Reduction of air pollution and GHGs emission

Lockdown during COVID 19 has lots of positive effects on the environment. There was a sudden drop in greenhouse gases (.....). Air pollution came down by 50 percent in New York City. Due to the closed down of heavy industries, China experienced a 50 percent reduction of N_2O and CO_2 (Henriques, 2020; Caine, 2020). The level of NO_2 in the air indicates industrialization and global economic activities. A significant reduction in the level of this GHG was recorded in industrially dominant countries like United States, Canada, China, India, Italy, Germany, Brazil (Biswal et al., 2020; Ghosh, 2020; Saadat et al., 2020). NO_2 and CO_2 are mainly released from the burning of fossil fuel, industries, and motor vehicle exhaust. These gases not only harm the environment but also cause different respiratory diseases in humans (USEPA, 2016). NO_2 emission dropped 30-60 percent throughout Europe especially in the cities namely, Barcelona,

Madrid, Milan, Rome, and Paris. In the US the level 25.5 percent during COVID 19 lockdown compared to the previous year (EEA, 2020; Berman and Edisu, 2020). Such a reduction of the GHG was recorded from Canada also (Adams, 2020). An average 50 percent reduction of NO_2 was recorded from India and Brazil. At the same time, the concentration of $\text{PM}_{2.5}$ and PM_{10} in the air was also reduced by an average of 50 percent in India during nationwide lockdown (Nakada and Urban, 2020; Thiessen, 2020).

Vehicles and aviation contribute 72 percent and 11 percent of GHGs in the environment. Approximately, 17 to 25 percent drop of CO_2 emission taken place during COVID 19 lockdown. Decrease in the use of fossil fuel, and dropped in oil demand of 435,000 barrels globally in the first three months of 2020, compared to the same period of last year, reduce air pollution (IEA, 2020). Coal-based power generation reduced by 26 percent in India and 36 percent in China compared to early February to mid-March of the preceding year (CREA, 2020).

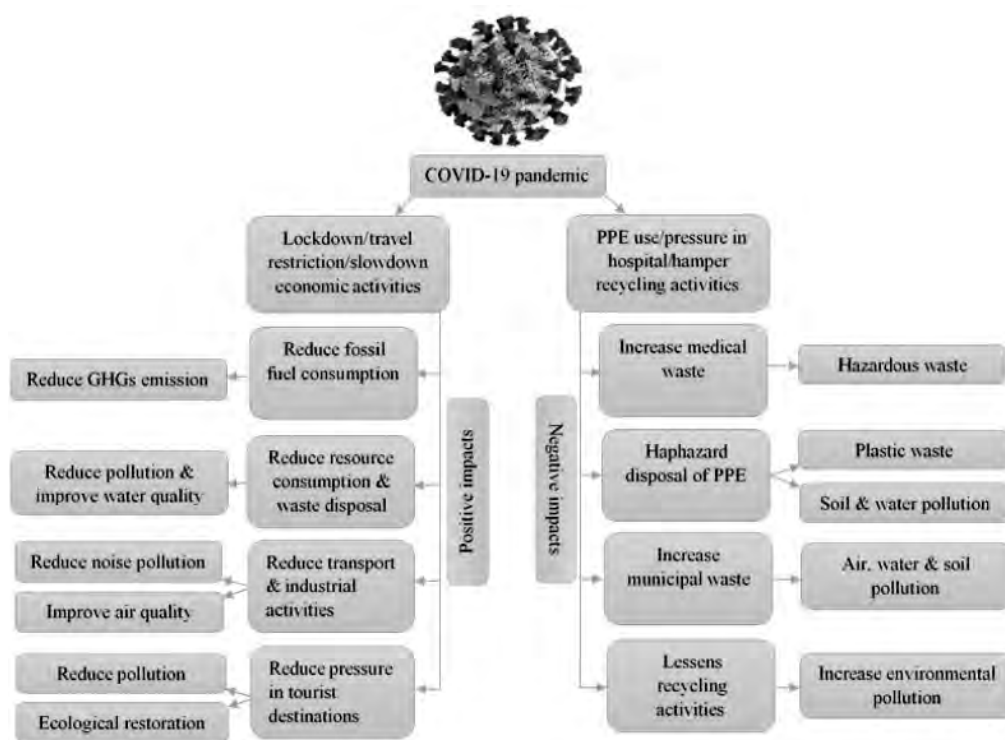


Fig.3. Positive and negative environmental effects of COVID-19 pandemic.(Taneja and Didar-Ul Islam, 2020)

Reduction of Water Pollution

In developing countries like India, Bangladesh, Brazil, etc., water pollution is a common phenomenon. This pollution is mainly due to the direct dumping of domestic and industrial wastes without treatment in the river and other water sources. The water of Ganga and Yamuna has been purified automatically. That was due to a less or complete stop of direct-release of wastes. Bathing was also controlled in different rivers and water sources during the lockdown. Among 36 working monitoring stations of Ganga studied, water from 27 stations reached the permissible limit. Fewer number visitors and 500 percent reduction of sewage and industrial effluents at Rishikesh. (Singhal and Matto, 2020).

Water quality monitoring data revealed that the standard of different physico-chemical parameters, for examples, pH (7.4-7.8), DO (9.4-10.6ppm), BOD(0.6-1.2 ppm), total coliform (40-90 MPN/100 ml) of the river Ganga recorded within the surface water quality standard of India. Electric conductivity and COD have reduced 33-66 percent and 33-82 percent, respectively. Except for total coliform in some monitoring stations, all other parameters even meet the national drinking water quality standard, which could use without conventional treatment but after disinfection (Class A) (BIS, 2012; UPB, 2020; Arif et al., 2020).

Water pollution also came down on the seashores of Bangladesh, Malaysia, Thailand, Maldives, and Indonesia (Kundu, 2020; Rahman et al., 2020). Jribi et

al. (2020), due to the COVID-19 lockdown. The amount of food waste was reduced in Tunisia, which ultimately reduces soil and water pollution. The amount of industrial water consumption is also reduced; especially from the textile sector worldwide (Cooper, 2020). A huge amount of solid trashes generated from the construction and manufacturing process responsible for water and soil pollution, also reduced. Moreover, the reduction of export-import business during the lockdown period, the movement of the national and international merchant ships, and other vessels were reduced, which also reduced emission and marine pollution.

Reduction of noise pollution

Around 360 million people are prone to hearing loss due to noise pollution globally (Sims, 2020). Over 100 million people are exposed to the high noise level above the recommended limit in Europe alone (WHO, 2012). Noise pollution, done due to anthropogenic activities, has adverse impacts on wildlife due to the change of balance in predator and prey detection and avoidance. Noise pollution has negative effects on invertebrates. Invertebrates control environmental processes those vital for the balance of the ecosystem (Solan et al., 2016). The quarantine and lockdown compelled people to stay at home. Restriction in economic activities and communication worldwide reduced noise levels in most cities (Zambrano-Monserrate et al., 2020). Delhi the capital of India showed a drastic 40–50 percent reduction of noise pollution in the recent lockdown period, and noise level came down to 50–60dB from 100dB in some places (Somani et al., 2020; Gandhiok and Ibra, 2020). Noise level of residential area of Delhi is reduced 55 dB (daytime) and 45 dB (night) to 40 dB (daytime) and 30 dB (night)

respectively (CPCB, 2020). The level of air and noise pollution of Kolkata reduced by 50–75 percent during the lockdown. According to data released by the West Bengal Pollution Control Board. Birds had reclaimed a part of their lost territory (DTE, 2020). As a result city dwellers enjoyed the chirping of birds, which usually range from 40–50dB. The noise level of Mumbai dropped to almost the standard level for commercial areas 65 dB, residential areas 55 dB, and silent zones is 50dB, respectively (IE, 2020). The whole of Europe and the United States also experienced a significant reduction of noise pollution during the lockdown period. This could be attributed to reductions in both road and air traffic movements.

NEGATIVE EFFECTS ON ENVIRONMENT

Increase of biomedical waste generation

Since the outbreak of COVID-19, medical waste generation increased globally, which is a major threat to public health and the environment. More than 240 metric tons of medical wastes were produced in different hospitals in Wuhan, China, every day during the time of the outbreak (Saadat et al., 2020), which is almost 190 m tonnes higher than the normal time (Zambrano-Monserrate et al., 2020). In Ahmedabad of India, the amount of medical waste generation is increased from 550–600 kg/day to around 1000 kg/day at the time of the first phase of lockdown (Somani et al., 2020). Different hospitals of Dhaka, the capital of Bangladesh generated around 206 m tonnes of medical waste because of COVID-19 (Rahman et al., 2020; Islam et al., 2020). Other cities like Manila, Kuala Lumpur, Hanoi, and Bangkok experienced similar increases, producing 154–280 m tonnes more medical waste per day than before the pandemic (ADB, 2020). Such a sudden rise in hazardous waste and proper

management has become a significant challenge to the local waste management authorities. Several used PPE found dump beside the road, hospital campus of different metro cities, including Kolkata. This type of careless mentality of the authorities also helped in the spreading of Corona virus in some cases.

Face masks and other plastic-based protective equipment are the potential source of microplastic fibers in the environment (Fadare and Okoffo, 2020). Usually, Polypropylene is used to make N-95 mask and Tyvek for protective suits, gloves, and medical face shields, which can persist for a long time and release dioxin and toxic elements into the environment (Singh et al., 2020). Steps have taken for proper disposal and segregation of household organic waste and plastic-based protective equipment (hazardous medical waste). But in most cases, waste workers are exposed to the virus and increases the risk of this disease transmission. (Ma et al., 2020; Singh et al., 2020).

Other effects on the environment

Extensive use of disinfectants in commercial and residential areas roads to combat Corona virus. Such extensive use of these disinfectants may kill non-target beneficial organisms, require to maintain ecological balance (Islam and Bhuiyan, 2016). The SARS-CoV-2 virus was detected in the faeces of COVID-19 patients and municipal wastewater in many countries, including Australia, India, Sweden, Netherlands, and the USA (Nghiem et al., 2020; Mallapaty, 2020). So additional measures in wastewater treatment are essential. That is a great challenge for developing countries like Bangladesh, where municipal wastewater is drained into nearby aquatic bodies and rivers without treatment (Islam and Azam, 2015; Rahman and Islam, 2016). China has

already strengthened the disinfection process (increased use of chlorine) for this purpose. But, excessive use of chlorine in water could generate harmful by-products (Zambrano-Monserrate et al., 2020).

It reported that the lockdown was not particularly good for those birds whose survival depends on food remnants scattered by humans across the city, something hardly being done anymore. Crows, kites, pigeons, and common mynas faced problems of survival.

EFFECTS OF COVID 19 ON GLOBAL BIODIVERSITY

Like the environment, COVID-19 also has an immense impact on global biodiversity. There were both positive and negative impacts. There was a decrease in pollution in the air, water, and marine ecosystem. Worldwide shipping was declined. There was a decrease in the release of industrial and domestic effluents in water. There was a noticeable reduction in NO₂ worldwide.

The anti-poaching patrol increased in the protected areas during lockdown periods. That results in the reduction of poaching of different animals in the most protected areas of the world. Due to cease of the vehicular movements, poachers were unable to enter the core areas of the forest and reserve areas. That prevented hunting and cutting and reduced the disturbance in the forests. That was also true for marine animals. As a result, flora and fauna flourished in their way due to the less anthropogenic interferences (Akinsorotan et al. 2021). It was reported that a short-term ban on business and consumption of bushmeat helped in the increase of different animals in the protected areas in China (Hockings et al., 2020).

There was also the negative impact of this pandemic on the biodiversity conservation process. Trained staff lost the job due to

financial crisis. Most of the developing countries depend upon tourists. More than forty rangers lost their jobs in Kenya because their salary is given from the revenue earning from tourism. Similarly, in most African countries, earning of revenue was decreased by 60 to 100 percent during this pandemic. Due to the financial crisis, local exploitation increased in Amazon, where deforestation increased by 34 percent (Escobar, 2020). An unprecedented global recession due to Covid-19 created a shortage of funding, which affected the monitoring process in Africa. Biodiversity conservation disrupted due to interruptions in research and training.

DISCUSSION

Studies revealed the positive and negative effects of COVID 19 and related lockdown situations on the global environment. COVID-19 has changed the regular lifestyle and work. Various health and safety measures keep more of us at home more often. Such steps change our behaviour, which is already impacting the environment around us in myriad ways. Satellite images and data showed a reduction in environmental pollution in this period. Air pollution levels dropped, because of Industrial activities in India, including extracting and crushing stone for construction projects, slowed or ground to a halt in this period. The particulate matter (PM), in the air, decreased around a third to a fourth of the pre-pandemic level in India.

Coronavirus is natural or man-made, the debate continues. But nature has no idea of this debate. Nature is re-arranging our favourite planet called Earth at its whim. Wild animals had got entry into the developed cities. Elephant herds are on their way safely. Ganges water pollution has almost halved. From where, the flock of flamingo has arrived in the wetlands of

Mumbai. A group of sea crocodiles, resting peacefully on a beach in Mexico. Wild civets are roaming the streets of Kerala, an animal that scientists have thought they may have become extinct after not seeing for the past two decades. The ozone hole has become small, due to the reduction of greenhouse gases in the environment. The rains have returned, saving vast areas of Australia from the inevitable drought. The warmth of the earth seems to have suddenly diminished due to less warming of the environment. Dhauladhar peak was visible from Jalandhar, Panjab. That happened for the first time in the last thirty years.

Contingency measures taken during COVID 19 period, have an association with the improvement in air quality, clean beaches, and environmental noise reduction. On the other hand, negative secondary aspects such as the reduction in recycling and the increase in waste created the contamination of physical spaces water, and land in addition to air. The return of global economic activity in the coming months in most countries will again increase GHG. So improvement (even if slowly) in the air quality during a short period, is not a sustainable way to clean up our environment (Zambrano-Monserrate et al. 2020). Hospital generated wastes (e.g., needles, syringes, bandage, mask, gloves, used tissue, discarded medicines, etc.) should be handled properly to reduce further infection and environmental pollution, which is now a matter of concern globally.

To get long-term relief from pollution and infectious diseases, scientists, economists, nature lovers have proposed different strategies for sustainable environmental management. A united effort is required globally for the better of human beings, as was observed during the fight against Corona virus. For sustainable industrialization, the use of cleaner fuels and technologies



Fig.4.Prospective strategies for sustainable environmental management (Tanjena and Didar-UI Islam, 2020).

and strong energy-efficient policies are required (Pan, 2016). After a certain period, industrial zones should have been shut down in a circular way to reduce emissions without hampering the national economy. Readymade garments and other industries, where several people work, proper distance, and hygienic condition should be maintained to reduce the spread of any infectious communicable disease.

The use of public vehicles in place of private vehicles should be encouraged. Bicycle is the better option for short distance travelling. Public bike-sharing and the use of electric vehicles are other options for reducing emissions.

The use of renewable energy can lower the demand for fossil fuels like coal, oil, and natural gas, which can play a significant role in reducing the GHGs emissions (Ellabban et al., 2014; CCAC, 2019). Regular recycling and reuse of wastewater and proper recycle and reuse of industrial wastes are essential for sustainable environmental management.

Hazardous and infectious medical waste should be managed appropriately by following the guidelines of WHO.

Ecotourism and the periodic shutdown of the tourist spot should be encouraged to promote sustainable livelihoods, cultural preservation, and biodiversity conservation (Islam and Bhuiyan, 2018). We need the practice of good behaviour like not wastage of food, switch off the electric and electronic devices after use, etc to reduce the carbon footprint and carbon emission.

This change in nature was temporary for COVID-19. Maybe this will lead to a recession in the global economy. But we need to plan for the future in a way that does not hurt natural resources (UN News, 2020). Seventy-five percent land of the earth is being used by humans. The very nature that gives us oxygen, controls the weather, pollinates crops, provides us with food, fibres, etc., is now under extreme pressure. An increase in pollution of the environment and misuse of natural resources will lead to

more new epidemics, more global warming and abnormal changes in the seasons.

“And as the engines of growth begin to rev up again, we need to see how prudent management of nature can be part of this ‘different economy’ that must emerge, one where finance and actions fuel green jobs, green growth and a different way of life, because the health of people and the health of planet are one and the same, and both can thrive in equal measure” (Anderson, 2020).

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Anxiety of Death and Search for Meaning and Authenticity in Social Isolation: An Analysis from Psychological and Existential Perspectives

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In a letter (1923) to the Countess Margot Sizzo-Noris-Crouy Rainer Maria Rilke, famous Austrian poet wrote these poignant lines, "Death is our friend, our closest friend, perhaps the only friend who can never be misled by our ploys and vacillations. And I do not mean that in the sentimental, romantic sense of distrusting or renouncing life. Death is our friend precisely because it brings us into absolute and passionate presence with all that is here, that is natural, that is love..... Life always says Yes and No simultaneously. Death...is true Yes-sayer. It stands before eternity and says only: Yes." (*A Year with Rilke*)

Death and concern over death have intrigued philosophers and psychologists for ages and they have relentlessly tried to answer the question that how an individual confronts death. For most people, death is something that will happen to us someday, not today. Not tomorrow, but sometime in the future, distant enough so that we need not concern ourselves at the moment. In our daily existence we try to ignore it and want to be at peace. So, usually in our clumsy existence we are always in a pursuing mode without knowing what we want to achieve and who we are. Death

is not just something that happens at the end of life. It is a part of us throughout, whether we confront it or not. The 'bloody truths' of life and existence has gradually plunged into a state of oblivion as a result of our quotidian existence.

So what is life and what is death? None of us want to be tormented by asking such loaded questions. Life means for us merely an existence for gratification of some pleasure or sometimes just a customary habit. Death means non appearance of someone's physical or emotional association or presence.

Death of someone can be terrifying to the concerned individual consciousness. The inescapable and unpredictable facets of death make us incredibly vulnerable. It is more evident at the crucial juncture of our human evolution when the overwhelming situation for the past few months that the global pandemic, COVID-19 has brought about. Sometimes it seems that it is a kind of "existential slap" with the realization that has suddenly dawned upon us and our usual unquestionable habit of life. Death remains a constant threat in the background of our usual or stereotype life, and now our belief system gradually absorbs the truth

that death can no longer be denied. With the death toll rising each day it brings the existential question right in front of us. The long denied idea of death or the idea that it is a distant thing in future has suddenly taken on a different turn and it poses a great deal of anxiety and a sense of isolation and a desperate search for meaning and authenticity in life. So, after accepting the inevitability of death, the question will be remaining unanswered for each of us, "what then is life?" The present crisis impels us to remain alive as an individual (neither as an isolated being nor as a member of the crowd) but as a committed, reflective, passionate human being and to ask, "How to live?" For existentialist thinkers, the uncertainty of death has a great impact on life. For Martin Heidegger (1889-1976), a renowned German Existential thinker, death is an unappreciated but important phenomenon of human life. Soren Kierkegaard (1813-1855), famous Danish Existential thinker (known as father of modern existentialism) also has an inclination to believe that we can never understand the problem of death. It suddenly robs us of physical or emotional securities and tears off the veil of physical embodiment and we are dumped into an utter 'nothingness'. Death offers us a simple nothing or "no-existence".

The existential psychologists have always attempted to put forward their perspective on death. According to Existential psychologists the terror of death is ubiquitous and of such magnitude that a considerable portion of one's life energy is consumed in the denial of death. If death is an undeniable fact, then we consciously or unconsciously want to stay away from this uncanny event. One can remember Sigmund Freud in this context, One's own death is unimaginable, since we all think of ourselves as spectators. (Solomon, 226) Freud speculated that the basic human

group which were the molecules of social life was formed out for human beings' fear of death. Human beings huddled together out of the fear of separateness. In order to overcome the fear of death and for progeny individuals perpetuate which is seen as a symbolic quest for mediated immortality. The problem lies not with the urge for perpetuation but must be how should an individual live a finite life? How can she/he face death with dignity and not despair? Existentialists have tried to address these questions and this paper will try to unravel the same.

(II)

Anxiety for Death or Search for a Meaning in Crisis

A world wide social isolation has been prescribed by many states to "save" our valuable life and to fight against an unknown enemy, no matter what may come afterwards at the end of this crisis. Sometimes it seems that there will be an utterly disrupted society with shattered, convulsive human existence after overcoming this crisis. Although, the existential crisis is always there in us with an apparent grandiosity but this pandemic unveils the mask of pretensions at individual as well as at societal level.

Existential psychology has centred its theoretical foundation on the inevitability of death and it investigates how people come to terms with the basic givens of human existence and try to make sense of people's being in the world. As the major existential concern for individuals is death, it creates a psychological conflict between people's acceptance of the inevitability of death versus their desire for continued existence. The desire for continued existence is again closely related to another major concern, that is, the quest for meaning and

stems from the conflict between people's desire to believe that life is meaningful and the events and experiences that appear random or inconsistent with one's bases of meaning. Throughout the literature of existentialism, we find that existentialists have repeatedly said that death or death anxiety being the primary concern of individuals provides a thought to find meaning of their lives. Rollo May (1909-1994), one of the prominent existential psychologists who introduced existential psychology to America, focused on anxiety related to death as an inevitable given factor in human existence and recognizes a prevailing sense of meaninglessness as a major problem. He says, "It attacks us from all sides at once." (Rollo, 105-106) A fear that can neither be understood nor situated in spatio-temporal world cannot be confronted and becomes more terrible still. It provokes a feeling of helplessness from which further anxiety would be produced and haunts the individual throughout his lived existence. May (1961) points out that the main source of anxiety and conflict comes from the self-consciousness of the subjective experience or 'I' in the world and with that an individual would be pushed to the worries about the state of non-being or nothingness in her/his physical reality. Paradoxically, in order to affirm or preserve their sense of self or subjectivity, they need to give up part of their self-centeredness by reaching out to others. He said that, in order to overcome the anxiety of non-being, they need to have the courage to develop new possibilities. He came to believe that it would be his will to live and his struggle to overcome death that would conquer his illness, not the marvels of medical science. May's standpoint can be traced back to his own traumatic experiences, where in his thirties he suffered from tuberculosis for two years in a sanatorium. His study

of existential philosophers resonated in a man fighting a deadly disease. Within the framework of those thinkers, May began to examine the concepts of existential crisis and anxiety as well as the differences and contrasting experiences of meaningfulness, hope, and joy (Corey, 131; Eliason, Hanley, & Leventis, 658-674). According to May, the experience of being in the world points to the experience of non-being or nothingness. The dread of nothingness is one of the existential given facts. However, this negative given may be mitigated by the positive existential given of yearning to realize one's new possibilities (In Wong, 192-211). So what was thought of as a conflict between two opposing existential concerns are actually the two sides of the same coin—the fundamental problems of the human existence (meaning and life) and death (anxiety for death)—they cannot be understood in the either/or possible framework of speculative philosophical logic but they have to be understood within a temporal horizon.

Throughout the Continental tradition of Phenomenology and Existentialism "time" or "temporality" has taken a pre-eminent role to understand the entire journey of an individual.

It will not be out of context if we now try to reflect upon the thoughts of existentialist thinkers, especially of Martin Heidegger. In his path-breaking work *Sein und Zeit* (translated in English as *Being and Time*), he devoted himself to the study of Being. Heidegger firmly holds the view that the fundamental tensions of contemporary culture are simply founded on our failure to apprehend the exact nature of Being. In his own words,

".....the world is darkening. The essential episodes of this darkening are: the flight of the gods, the destruction of the earth, the standardization of man, the pre-eminence

of the mediocre.... Darkening the world means emasculation of the spirit, the disintegration, wasting away, repression, and misinterpretation of the spirit." (Heidegger 2-4)

Hence, for Heidegger, the understanding of Being, i.e. what does it mean *to be* or *to exist* is the core problem not only for philosophy but also for all human beings in general. Being is still an enigma in our entire human epistemological endeavour. So, what is this 'Being' and why is there Being rather than nothing remain to be answered. The study of Being in Heideggerian thought requires another separate discussion, owing to the fact that bristles with complications and different nuances. Hence, for the present purpose, it is enough for us if we are ready to accept the meaning of Being as propounded by him in *Being and Time* as *Dasein*. *Dasein* is not the Subject, nor myself, nor an ego or consciousness nor any sort of Cartesian Cogito or 'I am'. *Dasein* is neither the Subject nor the object. Whenever we are trying to ponder within ourselves or looking at our surface personality, we do always find ourselves 'in the world' or amidst a surrounding world. So like Kierkegaard, Heidegger also tries to draw his reader's attention to the fundamental existential principle that there is no epistemological or metaphysical or transcendental, formal, non-committal, cognitive 'I' who can reside in a 'transcendental' world beyond the grip of the hustle and bustle of this phenomenal world. Hence, for him, *Dasein* means *Being-in-the-world*. He hereby also questions the justification of maintaining the subject-object (knower and known) duality of the world as carefully nurtured by metaphysicians and philosophers since Plato.

So for Heidegger, *Dasein* is not an epistemic subject, nor an ego or consciousness in isolation. Moreover, it is

neither transcendental nor empirical. *Dasein* is essentially 'ontological' (in the analysis of *Dasein* two concepts are there, 'ontic' and 'ontological'. 'Ontic' means a declaration or statement of existent being/'who' is she/he? There are many possible ways of being. She/he may be a teacher or a house maker or a doctor etc. On the other side, 'ontological' means a statement concerning the study of existent being, the later deals with the 'what' part of the existent being. It raises questions about existent being). Who can then ask about Being? We, the humans, we know that we are 'ourselves', but we are impotent to offer any further analysis of 'ourselves'. In a way we are not acquainted in a truest sense with ourselves. Thus, very briefly it can be said that his analysis of *Dasein* is actually an existential analysis.

In *Being and Time*, *Dasein* is further defined as *Sorge* (care). Human being is primarily concerned with himself and this self-concern has been coined by his own terminology, care. Care is basically a search to find out 'who am I'. Now, care has an existential structure and that structure consists of three different threads: *Existence*, *Facticity* and *Fallenness*. As he reminds us

"The essence of *Dasein* consists of its Existenz. We have defined the idea of Existenz as a potentiality-for-being—a potentiality which understands, and for which its own being is an issue." (Heidegger 232)

(III)

Existence, Facticity and Fallenness: Existential Structure

Existence:

This existence does not refer to any so-called unfathomed existence, but rather existence means 'possibility'. Existence is not a property or a predicate; hence

existence does not have possibility; on the contrary, Dasein is in each case essentially its own possibility. We need a further clarification otherwise one may fall in the trap of standard universal possibilities for all human beings. No, Heidegger or any existentialist would never agree upon a general set of possibilities for all individual beings. So, there is no a-priori or pre established human nature or essence or option by which we can measure or assume one's possibility over another. Now, whenever we say Dasein is his existence is to say: to be human in a committed way is to have free choice. Hence, possibility means 'a choice'. There are many options before us (Existing Being), we may choose or not, whatever is our decision it would be still a 'choice'. For existentialists, 'to exist' is none other than to make decisions, choose among many alternatives and 'to grow' or 'to become' to find out the answer of the question 'who am I'? We can briefly say that 'existence' (Ek-sistenz) means the projection of possibilities, possibilities of going beyond the given facts or situations. So there are a large number of possibilities before us, we may sum them up into two kinds of possibilities: authentic and inauthentic. As Dasein or Being-in-the-world we are endowed with so many possibilities, the 'choice' is ours, and we are free to choose what we will 'be'. We can choose because we have the freedom or potential to make any choice to set up a project or goal before us for making our existence 'meaningful' or making a 'value' for oneself by stripping off the dictates of society, religion and many more 'constructs' or presuppositions. Hence, authenticity refers to an adequate understanding of 'who' he is, 'a man's relationship to himself' and inauthenticity insists on looking upon man not as 'an individual' but existing as a part of 'public' or 'crowd'. Inauthentic man has no action,

no choice or no value as his own. The inauthentic man just remains a 'part' of the public and found her/his identity in her/his socially defined framework or role. These roles are determined by the crowd, not by the individual. We all have a tendency to fall in the trap of the socially structured role and being a conformist or being tuned with the note as presented before us just to shake off the responsibility of 'being oneself' and thereby try to get rid of the anxiety of 'being alone'.

Facticity and Fallenness:

Let us have a look at the second component of existential structure, *Facticity*. It may be understood as "fallenness" in Heidegger's thought. We find ourselves in a world or we are situated in a world or in place of 'givens' from which we cannot escape, we have been thrown in this world; none of us can be free from this. *Dasein* does not choose this world, my entire past life, experiences are intertwined with this given factual world. As a spatial body I am always present as a part of this world. I can leave or move from one place to another but I am always attached with my body. *Dasein* has been thrown into this unknown factual world and hence she/he has no choice or control over this. Given this facticity, the individual can explore a varied range of undetermined possibilities open before him and can exercise her/his choice. Man can ask or define uniquely herself or himself in her/his 'average everydayness', they can reflect on their own situation by becoming a 'man' but not as an 'average man'. But usually we do not do so. Undifferentiated average man always places her/himself in a dense security and revolves around the trajectory as a 'non-committal' person to be free from existential 'dread' or 'angst'. Dread is not a kind of fear of this or that 'factor', nor a kind of this or that future contingency, but

"dread is a fear of nothing". In this period of social isolation each man is troubled with one's own solitary existence and also at the presence of others for some unknown dread of morbidity, death, dread of death which ultimately triggers 'nothingness'. We have nothing sustaining in front of us, no morality, no philosophy, no self-alleviating thought, no rules except the strategic play of power technology and structure accompanied by immeasurable constant babblings for 'well being' of 'us' by having recourse to different questionable measures to keep away the 'death' or morbidity at a mass level. Who will take care of our fear psychosis for unknown and unknowable 'nothingness' in average everydayness except our own journey of surpassing the given factual situations by projecting ourselves towards another possibility.

Few of us can claim that we have an authentic life in a truest sense by being 'what I am'. Every human being is a toddler between two kinds of possibilities: authentic and inauthentic. Although authenticity is the aim of our existence but most of us all the time blindly follow the dictates and demands of the endless necessities, determined by the everyday 'public' life.

(IV)

Temporality and Death: To be or Not to be Authentic

We have already noted that care is to be understood as the existential structure in Heidegger's thought. Care is intrinsically related with time or temporality. No study or analysis of *Dasein* would be complete without the notion of temporality. *Dasein* is temporality, i.e. *Dasein* is essentially in time. Time has no objective status apart from *Dasein* or human consciousness. In a way, time may be grasped through our

subjective conditions. *Dasein* does not bring the concept of time into this world; it is an a-priori condition for Being-in-the-world (*Dasein*). There is a temporal sphere in which *Dasein* is defined as Being-in-time. Thus, R.C. Solomon comments: "Dasein is not primarily Being-in-the-world, but Being-in-time". (Solomon 224) Past, present and future are unified in *care*, i.e. facticity represents the past, because we are already Being-in-the-world, fallenness corresponds to the present, in each and every moment of life we are very busy with our daily task so that we do not have the space and time to reflect upon ourselves or our existence. We always prefer to glide to escape our own 'existence'. Existence always has an agreement with the future since our authentic and inauthentic possibilities are always directed as a project towards the future. What we will 'become' always bears a sense of directedness towards the time which is yet to come. Now, another question may be raised here, is this time infinite or finite? The 'public' always hold that time is endless or infinite because they do not have enough scope or quest to ponder over this issue. Their existence is 'tuned in' to what has already been there. But for Heidegger time is finite and it will come to an end. Hence, the projection of possibilities of *Dasein* also will end one day. That end is Death according to Heidegger. Hence, a reorientation of our existence is an extreme need. We are about to finish our journey at any moment, nobody knows when that dreadful moment will appear before us and we are forced to bid adieu to this world and life. Heidegger thinks that it is the threat which makes us delve into our true or authentic existence. It is death which sets an alarm just reminding me that the time of my life is limited. So, whatever decision or choice makes life meaningful, has to be made on an urgent basis. This

passionate understanding tries to utilize the time meaningfully, as I do not have infinite time to do whatever I wish to do. Time is limited, hence the prospect of death offers a choice before us, the choice to be authentic or not, because “I can die only my death” (Solomon 227). Death always reminds us that we are not *Das Man* or public. ‘I am’ as a Being-in-the-world come face to face with inevitable death and realize that Death is *Dasein’s ownmost possibility*. The inevitability of death produces an upheaval of tremendous guilt (*schuld*) in us, it goads us for whatever we tried to do or whatever we have not done yet, and makes us feel that an important decision is yet to be taken to be ‘oneself’ or to realize one’s true Being in this world. No transcendental or metaphysical world or god is required to be oneself, this life within this temporal horizon is enough to take the resolution of the journey towards the inner realization of being oneself. In the end, it is not the years in your life that count, it is the life in your years. (Cox 106)

(V)

A similar line of thought is put forth by another influential American existential psychologist Irwin Yalom, who like May believed that we can live meaningfully when we confront death anxiety and other existential givens. In other words, confrontation with death or death anxiety makes us strive for meaningfulness in life. Yalom (1980) lists four existential givens relevant to psychotherapy: the inevitability of death, the freedom to choose how we live, our sense of ultimate aloneness, and the obvious meaninglessness of life in the face of the previous three givens. These givens create a lot of anxiety, and many psychological problems arise from our defence mechanisms in coping with existential anxiety. He places *death and dying*

at the forefront of the four ultimate concerns. He says an instinctive fear of death exists at every level of human awareness, from the most conscious and intellectualised, to the deepest depths of the unconscious, which manifests as death anxiety. Sometimes the anxiety is of such enormous proportions that a considerable amount of a person’s life energy is thus consumed in the denial of death. “The fear of death plays a major role in our internal experience; it haunts as nothing else does; it rumbles continuously under the surface; it is a dark, unsettling presence at the rim of consciousness” (Yalom 27). Josselson (2008) writes, “overshadowing all these ultimate concerns, the awareness of death, our inevitable demise, is the most painful and difficult” (Josselson 59).

Yalom (1999) argued that the inevitable is not death anxiety, but death itself. He also pointed out that, in order to deal with death anxiety, one must face death, recognize death, and understand death (Yalom 145). According to existentialists, every inner life must ultimately come to terms with the finiteness of life and confront the question of “What is the meaning of life?” (Yalom 150). Yalom considers death and life as interdependent and says the concept of death plays a crucial role in psychotherapy also because it is paramount in the life experience of each of us. He was influenced by existentialist thinker Martin Heidegger. Yalom (1980) interprets this by saying that, one’s recognition and acceptance of death can contribute a sense of poignancy to life and provide a radical shift of life perspective. Moreover such a realisation can “transport one from a mode of living characterized by diversions, tranquilisation, and petty anxieties to a more authentic mode” (Yalom 40).

It can be said that the meaningfulness of death depends on the meaningfulness of life. There is a search for a meaning that

cannot be destroyed by death. People want their existence is valued by others; they are driven by a sense of purpose, or important life goals; and they understand their lives as coherent and integrated. Psychologists and philosophers say that the path to meaning lies in connecting and contributing to something that is bigger than the limited notion of own- self.

Van Duerzen-Smith considers death to be the ultimate fulfilment, but says most people miss the opportunity to be fulfilled by death because they never properly live towards it. Moreover, in their avoidance of death, they are generally unprepared when the time of death draws near. "We flee from death through all the everyday things that we do and fail to notice that death is our greatest potential." (Van Duerzen-Smith 41) Yalom (1980) also says a tension is created between one's awareness of the inevitability of death and one does wish to continue to be, and that this tension presents a core existential conflict. He says what is truly terrifying about death is that it implies the dissolution of one's world, and furthermore with death, both the meaning-giver and spectator of the world dies too, and one is truly confronted with nothingness. (Yalom 30).

But what comes out as the basic fact is that there is a search for meaning, the need to create meaning, the ability to experience meaning as a basic motivating force of human behaviour.

This idea is also brought forward by another existential psychotherapist Viktor Frankl (1905-1997) who was the first to emphasize positive existential givens. The foundation of his thinking and personal philosophy was the result of his experiences and keen observations in World War II Nazi concentration camps. He, like everyone else was imprisoned there, suffered the horrors and indignities of starvation,

overwork, poor hygienic conditions, and torture. Many people died at the hands of their captors; however, others gave in to the overwhelming feelings of powerlessness, hopelessness and despair. Frankl believed that there were fundamental differences between those who survived and those who died. Those who survived, and in some cases came out of the experience emotionally stronger, had found some person, event, activity or concept to live for that gave their life meaning and provided the counterbalance that offset the strong urges to despair and surrender to death. In his book *Man's Search for Meaning* he writes that:

"We who lived in concentration camps can remember the men who walked through the huts comforting others, giving away their last piece of bread. They may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of the human freedoms – to choose one's attitude in any given set of circumstances, to choose one's own way." (Frankl 45)

This is remarkable, because given his personal experience, he experienced more horrors and sufferings than any of the other existential philosophers and psychologists and interestingly he approached the concept of death in a very different manner; he said that man's search for meaning is the primary motivation in his life and not a "secondary rationalization" of instinctual drives. This meaning is unique and specific in that it must and can be fulfilled by him alone; only then does it achieve a significance which will satisfy his own *will* to meaning. Frankl is unabashedly positive, emphasizing human strengths without downplaying the difficulties inherent in human existence.

Frankl says:

"...(M)eaning is something to discover rather than to invent." (Frankl 113)

According to him, it has a reality of its own, independent of our minds. Like an embedded figure or a “magic eye” picture, it is there to be seen, not something created by our imagination. We may not always be able to bring the image – or the meaning – forth, but it is there. It is, he says, “primarily a perceptual phenomenon.” (Frankl 115) Tradition and traditional values are quickly disappearing from many people’s lives. It is difficult undoubtedly for us, but surely it would not lead us into despair: Meaning is not tied to society’s values.

(VI)

Once Soren Kierkegaard said life must be understood backwards but it must be lived forwards. Existential thinkers strongly uphold a bare truth that no social or religious normative value system can ever make individual life and existence meaningful in any universal manner. Each person has her/his own way for realizing the meaning of life, without hurting the ‘life-world’ of other beings in nature. Thus, we need not perceive death as a stiff cliff waiting to hurl us into a dark abyss; rather it gives us pause by throwing the beauty and freedom of life into relief. If we agree to concede, it might gently take us by the hand and lead us up the path of realizing the vibrant joy of our existence. Rilke had once said:

“Let everything happen to you
Beauty and terror
Just keep going
No feeling is final.” (*Book of Hours*)

All these perspectives once again in this terrible worldwide situation reminds us over and above death anxiety and many more uncertainties that there is still a subdued hope in this tormented life; death is not a tragedy, a life without renewal is a

tragedy. In an interview Sherwin Nuland (1993), a Yale surgeon, says in his book “How We Die,”

“To me, the hope that can exist at the time of death is the hope of our heritage, that we have really meant something to people, whether they are our own children or friends or students, whatever. That’s the hope, the hope that your heritage is something good for others. And I think when you think of death as being part of the life cycle and recognize that death is an inevitability for our species because the world has to be renewed with each death, then the hope becomes that when it is renewed it will be renewed by people on whom I have had some influence for good.” (Breitbart 276-278).

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Theory of Causality and Corona Virus: A Study from Indian Philosophical Traditions

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Abstract

All the schools of Indian Philosophy have admitted that both world and life are painful. This is why Indian Philosophy is known as pessimist. They realized that life is driven by unrestricted emotion and consequently suffering or pain is revealed into life. According to the Indian Philosophical schools, there are three kinds of suffering in life- *adhyatmika*, *adhibhautika* and *adhidaivika*. The ultimate cessation from these three types of suffering is called salvation or 'moksha'. All these three types of sufferings are evil and everybody wants to get rid of those evils. It is important to note that the three-fold distinction of suffering is still relevant in present days. It is notable that suffering caused by human being, fork, birds, beasts, reptiles and other animal or creature is called *adhibhautika*. As the Corona Virus is supposed to be generated from a living creature, in this sense the corona virus may be categorized as *Adhibhautika*. This virus has been produced by the hands of human beings. If so, the human beings are themselves responsible for the notorious effects of the virus. We can understatedly affirm that self-centric man and his endless greed, ambition for fame and money are accountable for this suffering. Corona Virus is a vivid example of it. But there is a ray of hope that nothing is permanent. Everything emerged will be destroyed. Corona Virus is emerged from something or by someone and it will definitely be destroyed. Now we should very much careful about our nature and pray to the Almighty God for a healthy and prosperous and Corona free life.

Keywords: Indian Philosophy, Suffering, Covid-19, Corona Virus, *adhibhautika*, salvation, evil.

There is a strong allegation against Indian Philosophy that it is pessimists in nature. But this statement does not represent complete truth, because there is another side of the coin which asserts that all the school of Indian Philosophy except *Carvaka* have favoured optimism. They hold optimism in the sense that the schools admitting the reality of suffering, looked for the escape

route from the suffering. But at the same time, we observe that every school has a distinct and independent pronouncement regarding the path of salvation.

All the schools of Indian Philosophy have admitted that both the world and life are painful. There is pain in every sphere of life. The Indian philosophers discovered that life is driven by unrestricted emotion and

consequently suffering or pain is revealed into life. The Indian Philosophical Schools were not only identified the chief reason for the suffering but also searched for the exact way out. Thus, the motto of the entire ancient Indian Philosophy, we observe, was to overcome suffering and achieve the permanent liberation from bondage.

There are three kinds of suffering in life – *adhyatmika*, *adhibhautika* and *adhidaivika*¹ admitted by most of the schools of Indian Philosophy. The suffering due to bodily disorder and mental agitation is called *adhyatmika*. Such as fever, bodily pain, greed, anger, hatred, fear etc. are *adhyatmika*. Suffering caused by human being, birds, beasts, reptiles and other animal or creature is called *adhibhautika*. And lastly, the suffering caused by some supernatural entities like ghosts, demons, planets are called *adhidaivika*². All these three types of sufferings are evil and everybody wants to get rid of those evils. It is important to note that the three-fold distinction of suffering is still relevant in present days. As the Corona Virus is supposed to be generated from a living creature, in the face of it the disease seems to be spread out from the virus, may be equal to an evil. So, in this sense the corona virus may be categorized as *Adhibhautika*. This virus has been produced by the hands of human beings. If so, the human beings are themselves are responsible for the notorious effects of the virus.

The self-centric man and his endless greed, ambition for fame and money are accountable for this suffering. Man always uses nature for their own interest but in return he never even tries to engulf this loss. The word 'environment' encompasses everything around us both animate and inanimate beings. Both biotic or non-

biotic entities are equally important and mutually dependent on each other. So, ecology provides the necessary and sufficient condition for sustaining human life.³ But it is an irony of fate that human being has forgotten this indispensable concept of dependency. They are gaming with the nature and its living and non-living elements for their own selfish motivation and the results are not soothing always. Corona Virus is a vivid example of this gaming. As a result all the people in the world have been suffering from this virus. Primarily it was an epidemic, but recently it has transformed into a pandemic. Till now there is no remedy for this virus. This is how man has welcomed their own danger by making the nature unhappy.

In the ancient India people called 'poisoning' of environment instead the term 'pollution'.⁴ People in ancient days were much conscious about nature. It is said in *Atharva Veda* that the 'earth is our mother' and we are her offspring. So it is our duty to protect her as her offspring.⁵ But like an ungrateful child, we are exploiting the nature by leaps and bounds in various ways like deforestation, animal killing, atomic experiment etc. Now, it is nature's turn to punish us and Covid-19 might have been a form of the punishment.

Gautam Buddha had introduced in his philosophy the concept of '*Brahman Vihara Vabana*'. This concept is further composed of four elementary concepts – *maitri*, *karuna*, *mudita*, *upeksha*.⁶ All these concepts teach us not to be self-centric and everyone should always think about the good of all living and non-living things and always to be kind and non-violent to others. But selfish man

1 Jagadwishar Sanyal, 1982

2 Jadunath Sinha, 1985

3 Rajib Sarmah, 2015

4 Lalita Agrawal, 2018

5 Lalita Agrawal, 2018

6 Piyushkanti Ghosh, 2006

always thinks about his own happiness. Thus man always causes harm to others. For the sake of his own interest, greed; consequently he is doing evil things again and again.

Now the question may be - what is evil? It may be said that evil is the opposite concept of good. In simple language bad deeds are evil. Philosophy of Religion has admitted two kinds of evil - 1. Natural evil and 2. Moral evil.⁷ Natural evil effects not only on human beings but also on animals, birds, plants, creatures etc. Death, disease and pain are the main evil. Besides natural calamity like draught, flood, storm, epidemic etc. are also called natural evil. Natural evil takes place according to natural law and men are helpless in front of it. But moral evils are solely related to human life and the voluntary will of human beings are responsible for generating it. This evil is called sin. Only human being can commit sin. No other animal can commit sin because they are not self-conscious. Animals are only driven by instinct but human beings are driven by amalgamation of intellect and animal instinct. Man has been successful to subjugate the nature with the help of his intellect. But every coin has two sides. Man has misused his intellect and consequently made the nature unhappy. As a result all the people in the world have been suffering from an incurable disease. So, Corona Virus, according to Philosophy of Religion, a man-made moral evil. Moral evil has so much increased that it has come back to our life in the form of natural evil, an epidemic, Corona Virus.

But theists have offered some explanation about evil.⁸ They said that though pain, sorrow and death are not desirable, nonetheless these are necessary. For

example, pain is essential for human existence, because one can survive and struggle in life through pain. He becomes stronger mentally and physically. Similarly death is a necessary step for a new life. Nobody is immortal and this is the law of nature. If there is no death on the earth then new life, new thoughts would never be grown up. So, the evolution process will be stop if there will be no death. So, pain, sorrow and death are necessary rudiments in human's life; but the endless greed, hunger of power, position, money etc. have made the sorrow, pain, death more throbbing and reckless.

According to Buddha, man and his selfish desires are the cause of his own suffering. Ignorance or *avidya* about world and life is the cause of his desires. They think that the world is permanent, mundane things are perpetual and that is why man feels attachment with the mundane things and tries to get those things. This is ignorance according to Buddha because everything is impermanent, the world, life, earthly things are all momentary. If we can understand this truth then we never feel any desirability to get mundane things and we can easily get rid from suffering. In this connection it is notable that Buddha introduced twelve linked chain of causation of suffering which is called in Buddhism, '*Duhkha Samudaya*'. It means suffering is a fact and it has a cause. This doctrine is also called the doctrine of 'Dependant Origination' or '*Pratityasamudpadavada*' which means arising (*samudpada*) after getting (*pratitya*), production of an effect depends on a condition. Suffering is a fact and it has cause. Here are the twelve causes behind the suffering-

Old age and death belonging to the future life (*jara-marana*) are sufferings or *duhkha*; *jati* or rebirth is the cause of these sufferings; the desire of birth or *bhava* is the cause of

7 Samarendra Bhattacharya, 2004

8 Samarendra Bhattacharya, 2004

rebirth. We have the desire to rebirth that is why we get birth again and again; grasping or *upadana* is the cause of desire of birth. If we did not connect with the mundane things, we would never feel any attraction about them and never have the will to be-born; craving or *trishna*, the urge to get the pleasure of the mundane things is the cause of grasping; feeling or *vedana*, the past sense-experience is the cause of craving; we have the experience about mundane things. So we want to enjoy them again and again; contact or *sparsha*, is the cause of feeling. If we did not have any contact with worldly things, we did not get any experience about them; *sharayatana* or six-sense organs are the cause of contact. We get sense experience through our sense-organs; the mind-body-complex or *namarupa* is the cause of six-sense organs. Mind-body-complex produces the five external sense-organs and the internal organ or mind; consciousness generates the new mind-body-complex. If there was no consciousness in the mind-body-complex, it would never be grown up in the womb; so, consciousness or *viijnana* is the cause of mind-body-complex; disposition belonging to past life or *samskara* is the cause of consciousness; and the ignorance or *avidya* is the cause of *samskara*. Ignorance means the false knowledge about the reality of world.⁹

This false knowledge makes human being very much greedy and selfish. For ignorance man thinks that fame, money, power are eternal and he tries to get all these things. To get power, money, fame man becomes selfish. The result of this selfishness is present situation, covid-19.

So, ignorance is the root cause of all suffering. By the veil of ignorance man thinks that world is eternal and he tries to grasp worldly things and this craving is the cause of will to-be-born again and

again. And birth is the cause of suffering and death. So, we have to remove ignorance and make our mind pure and unselfish. Then we can understand that the life and world are momentary and we shall be able to leave greed, anger, hatred and so on. In this way, man would leave his craving for impermanent entities and he can escape from the circle of birth.

In Indian Philosophy, there are different views regarding the way out of suffering which are called 'the path of salvation or *moksha*'. Buddha mentioned the eight fold path of *nirvana* or salvation, the *Ashtangika Marga* – 1. Right faith (*samyaka drishti*), means true knowledge. False view about self and world is the main cause of sufferings. Everything is mortal, the world, earthly things all are impermanent. Knowing this truth is right faith; 2. Right resolve (*samyaka samkalpa*). Only right faith is not enough, we have to take resolution to move on our life in the light of this knowledge; 3. Right speech (*samyaka vaka*) or restraining words. This means not to tell a lie, always speak truth, speak pleasant words etc; 4. Right conduct (*samyaka karmanta*). It includes *panchashila* – *ahimsa*, *satya*, *asteya*, *aparigraha* and *brahmacharya*. *Ahimsa* means non-violence, *satya* means not to tell a lie, *asteya* means not to steal, *aparigraha* means not to take excessive things and *brahmacharya* means not to engage in illegal affairs; 5. Right livelihood (*samyagajiva*) means earn in a honest way to live one's life; 6. Right effort (*samyaka vyayama*), means mental exercise to eradicate every bad thinking from mind and filling it up by good thinking; 7. Right mindfulness (*samyaka smriti*) it means one should always remember that everything is impermanent momentary and there is no permanent self; 8. Right concentration (*samyaka Samadhi*)¹⁰. It means focusing the

9 Jadunath Sinha, 1985

10 Jadunath Sinha, 1985

mind on the good things which are true as well as. Buddha said that if human beings know the root cause of suffering and follow these *ashtangika marga* then they will definitely be non-violent to other and will love everyone. Self-centric man will become unselfish. Being unselfish human being never wants to cause harm to other and never produces any other sufferings like corona virus.

So, we have to control our passion, words, behavior, lifestyle etc. We have to regulate our passions, speech, actions and even our lifestyles.

We have to control our greed, anger, hatred, related to our mind, our body. Further we have to control our actions. In this way we can get rid of suffering and earthly evils like corona virus.

In this connection the law of *karma* is very relevant. All the school of Indian Philosophy except *Carvaka* admitted the law of *karma*. According to the law, good action produces good consequence and the bad actions generate bad results. Corona Virus is out and out a bad consequence and perhaps is related to ill actions of human beings. So, we have to do nothing but accept this consequence. *Rig Veda* holds that there is a cosmic order, the *Rita*, pervading in the universe.¹¹ Both the moral and material life is directed by *Rita*. *Varuna* is the custodian of *Rita*. His eyes are like the Sun and nothing can be hidden from his eye sight. The stars, the moon, the sun, river, air, even all creatures including human being are ordered by the law of *Rita*. But today the clever, greedy human beings are violating this cosmic order. That is why this evil, Corona Virus has spread out on the earth.

Still there is a ray of hope that nothing is permanent. According to Buddha

everything has a cause.¹² He had drawn this conclusion from the second noble truth '*Duhkho Samudaya*' which is also called the theory of dependent origination. According to this theory, everything evolved from cause or condition is momentary.¹³ If the cause will be removed then the effect will be cease to exist. Logically speaking, Covid-19 is an effect, it definitely has a cause. If we can find out the cause of Covid-19 then it will possibly be destroyed because it is also momentary. Let us hope for the good because the whole universe is blissful. It is voiced in *Rig Veda* –

*madhu vatah ritayate madhu
ksharanti sindavah
madvih nah santusadhi
madhu naktamutsasu
madhumatparthiva rajah
madhu ksorastu suryah
madhirgabo bhavanatu nah.*¹⁴

The Veda believes in the absolute existence of Brahman, the sole reality of the universe. It is blissful in nature. It means the whole universe is the happening of the one and only *Brahman*. So, it is blissful. All the elements of nature—river, air, sea, sun, moon, stars, plants, dust—everything provides bliss for human being. So, we should care for our nature and the nature, our mother will definitely save us. We should pray to the Almighty God for a healthy and prosperous life by uttering this 'Shanti Mantra'—

*Peace of sky, peace of trees,
Peace of all Gods, peace of Brahman,
Peace of universe, peace of peace,
May that peace come to me.*¹⁵

11 Jagadwishar Sanyal, 1982

12 Jadunath Sinha, 1985

13 Jadunath Sinha, 1985

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The Social Pathogen: A Sociological Analysis of the Dialectics of Sociality that Covid 19 Made Mankind Encounter

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Keywords: Coronavirus, Social Distancing, Rhetoric of Social Distancing, Sociality, Social Pathogen

Introduction

Life in the current era largely associated with the Post-modern condition is, considered as something ever changing – be it the industrial, technological or the ‘social’ it is featured. It is featured by expanding consumerism, modified pattern of paid labour for women, domestic help, shifting immigrant patterns, increasing affluence and new leisure activities for large number of people. At a time when economy across the world stands as the sole determining indicator of ‘power’ followed by, ‘when money can buy every single pleasure and leisure of life’, when the ‘fluidity’ of our times made us compress the dimensions of space and time in an ever-increasing manner the entire mankind encountered a never experienced intrusion of the Novel Corona Virus that disrupted the entire social life of the human civilization.

Covid 19: A Social Challenge

The entire contour of the human civilization not only appears to be stalled but has been forced to change because of this pandemic situation. Scientific and

technological innovations across the world along with an ever-increasing Research and Developmental activities made mankind rest faith in the supremacy of science and medical facilities. The immunization schedules made us take into stride all the precarious virus exposures. Diseases are fought back not only with physical strength but also with the involvement and allocation of huge budgets towards medical contingencies. This not only resulted in the rise of the medicine industry like never before but also made the ‘affluent’ class people believe that they can fight back physical infirmities and for those who can afford treatment, the pain can be made more bearable. This paper seeks to unfold the various points of intersection that Covid19 is making with various social institutions that in itself is making mankind encounter a major psycho-social haul and creating a diorama of social and mental challenges, creating an edge for the reframing of the ‘new’ social.

Coronavirus and the New Social: Analyzing Intersections

The intrusion of Covid 19 into the lives

of the people is not only causing death and disease but is also resulting in a paradigm shift in the entire psycho-social realm of the individuals. Coronavirus or Covid 19 is defined by World Health Organization (WHO) 'as an infectious disease caused by the newly discovered coronavirus'. It spreads primarily through droplets of saliva or discharge from the nose of an infected person through coughing and sneezing. In spite of the global drive for mass vaccination now going on in different parts of the world, the precautionary measures recommended by WHO remain equally important in the global fight against the pandemic. These precautionary measures include social distancing and isolation, social quarantining or locking down of all non-essential social contacts, washing and sanitizing of one's hands frequently, quarantining oneself, covering one's mouth while coughing and sneezing etc. 'Social distancing' is seen as the most important line of fight of the human species against the novel coronavirus as the transmission of Corona Virus can take place even asymptotically and it can even get transmitted as many as five days before the manifestation of symptoms in an infected person takes place. So, reduction in social engagements and interactions between even apparently healthy people acts to slow down the spread of the virus.¹

The *differentia* as in this case has been created by intertwining two most crucial factors, these are: the current situation has revealed a state which was not only never experienced before by any living generation of human species but also perhaps was never thought of, and the second dilemma is that the precautionary measures needed for fighting with this virus has made mankind stand in binary opposition with the very

'social' nature of humans. The presence of micro-organisms is the cause of disease. Pathogenic organisms can generally be categorized as viruses, bacteria, fungi, protozoa, and since Covid 19 is a form of virus which can cause infections in individuals, it is classified as something pathogenic. But when we take it beyond its biological parlance it can be designated as a 'social' pathogen. This coronavirus essentially got efficacy in totally disjoining individuals from the social whole. So the entire social network is purposefully disrupted through policies and measures to prevent the spread of the infection. However advanced an economy may be, no country across the globe can provide effective infrastructure for treating a major chunk of the population that may require medical attention because of a pandemic. What Coronavirus does to the social whole is much like what a virus does to a human body. Coronavirus enters the human bodies like hijackers acting to invade living, normal cells and use those cells to multiply and produce other viruses like themselves. This can kill, damage or change the cells and make one sick. Similarly, containment of the spread of this virus calls for quarantining oneself and maintaining social distancing. The entire network of relationships revolving around the diorama concerning the individual-social and psychological realms that we have quintessentially internalized as being part of the social order have been halted all of a sudden. The emphasis on the social whole is receiving an altogether different and novel understanding when real-time interconnections between individuals and groups which as we know are essential conditions for survival and advancement of the human species have been hindered. The state, the nation which formulates policies to promote successful interactions between groups of people,

1 Long, Nicholas J. (2020:2)

is seen to formulate policies to actualize phases of lockdown. The essential rights and freedoms have all been withdrawn with forceful and warlike restrictions forbidding any form of social contacts apart from the ones that one's household can entail and offer. This has created a situation of social pathogenesis. The current circumstance is witnessing damage and change in the social circumstances because of the influx of the coronavirus. The way it is plaguing the social life is majorly a cause of mental trauma and depression for the individuals being disrupted or disjoined from the social whole.

The Pandemic Model and the Indian Scenario

Following *Ferguson et al.* the pandemic model that has been adopted by the top economies like the United Kingdom refers to the policy measures that incorporate 'General Social Distancing' as an effective gauge to reduce the percentage of virus transmission to a considerable rate. However, the effectiveness of this general social distancing is coupled with other factors like locking down of non-essential social institutions, maintaining social isolation, creating effective awareness coupled with fast and effective treatment and the cure of the diseased. 'General social distancing' is here defined as 'all households reduc[ing] contact outside[the] household, school or workplace by 75%', workplace contact rates reducing by 25 percent, household contact rates increasing by 25 percent, and school contact rates remaining unchanged.²

As in the case of India, we have experienced Corona virus much later than the other parts of the world or to be precise much later than the top economies of the world where the transmission started quite

early from the very locus of the spread of the disease. The consequences of it have definitely been two-fold: one is the fact that for developing techniques of prevention and steering effective measures of reduced social contacts time was available. But it is also indicative of the fact that in a country with such high levels of population density and polar pauperization issues, facing a dearth of medical facilities to support a densely populated country like India in such a pandemic, the chances of transmission and rendering effective treatment and dealing with a number of social issues that can be created by such a social pathogen is quite low. In case of India, already perturbed by a number of social issues, the enforcement of 'General Social Distancing' stands as a great challenge, where the problem is triggered by the fact that the country is itself a developing economy where certain class's needs and requirements stand in polar contradiction with the needs and requirements of certain others. The Government is also perturbed by the issues of the migrant workers both engaged in skilled and manual workforce both within the peripheries of the nation and also outside its ambits.

The 'Rhetoric of Social Distancing'

The essential 'rhetoric of social distancing' is crucial to understand how individual health measures have determining effects on the general health of the population along with maintaining containment by staying away from the epidemiologically risky areas. These are making people live in a flux when not only the maintenance of the measures of containment of the state appears draconian but at the same time social relationships are to be viewed as spurious and doubtful, deviating from their essential understandings as resources.³ The macro-micro encounter in practices

² Ferguson, et al. (2020:13)

³ Long, Nicholas J. (2020:7)

related to the containment of the virus can be analyzed to have an inherent dialectics in it. The entire notion of the 'social' has been brought down to individualized practices of isolating oneself from the 'social'. The 'new normal' calls for individualized practices from the micro end towards (a forceful or now-a-days often wishful) maintenance of 'social distancing' which can be seen as a major determinant for the macro level as an effective tool for the containment of the community spread of the coronavirus.

Thus what the current situation is entitling us is to cut oneself from the network of the social whole at least physically and contain oneself within the confines of the household as that is considered as an effective measure in containing the spread of the virus within the community. Thus this situation creates a vacuum which can be termed as 'The Great Hollow of Sociality'. Before we further discuss about the *social vacuum* created by the Coronavirus let us talk about the process through which an individual is transited to a social being through various agencies of socialization. A society transmits its norms to its members through the process of socialization. It is this process of socialization that renders uniqueness to human beings. The term socialization refers to an unconscious process by which a newborn child learns the values, beliefs, rules and regulations of society or internalizes the culture in which it is born. Socialization, therefore, equips an individual in such a way that he can perform his duties in his society. Socialization occurs throughout our life, but some of the most important socialization occurs in childhood. The most influential agents of socialization during childhood are family, school, peers, and mass media. In this revolutionary era of Information and Communication Technology (ICT), the effect of media in shaping people's attitudes

and outlooks has reached the peak. Media conveys a whole variety of information which individuals could not otherwise acquire. Newspapers, books, radio, television, bring us into close contact with experiences of which we would otherwise have little awareness. So, the social networks humans are used to immediately suffer a halt because of the Corona Virus. So, these institutions which are very instrumental in their operations of steering individuals from isolated islands to social units, what *George Herbert Mead* refers to as transition from "I" (Individual) to "Me" (Social self) all stand in a dialectical relationship with the individuals. All these institutions break down assigning a forceful isolation from social network largely making the "virtual" not only the "new social" but rather the 'only mode of sociality'.

Conclusion: A 'Living Historical Period'

Sociality is created out of a plethora of situations, to be perceived as a network often complex, and any measurement and control mechanism that is designed and placed from the top has to be effective in terms of the 'Top-down Approach' to discontinue with the physical social networking—*But not only is this difficult but it also appears to be forceful for the people. These measures after intertwining with the needs and conditions of the different sections of the society create a mesh that makes life and situations different for diverse sections of the society. These affect sections and classes of society not only differently but they often stand in contradiction with one another. The situation turns out to be even uglier for nations with people majorly in need of their basic necessities along with nations where the society is divided into classes that have varying and diverse needs and requirements.*

To conclude it can be pointed out that it is too early to analyze any impact of Covid 19 as we are still fighting with this pandemic. It

can be said that we are living in a 'historical period' and experiencing social, mental and physical challenges like never before. So the effects and impact cannot be properly analyzed at this point of time. Rather it can be said that it is too early to enumerate and determine its effects as the social life, the laws and wills of sociality would never remain the same as before. This epoch would be important as a historical marker and would be important in designing ways and techniques to again lead a new form of 'social life' largely different from what we have been socialized to. The consequences

of this is far-fetched and longterm, so whatever analysis has been made is only based on what we are experiencing at the current moment.

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Pricing of Cloud Resources: Some Key Factors

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Abstract

Since the inception of cloud computing a large number of researches have been done on its different aspects. Among several aspects of cloud computing, one of the most significant fields is pricing of cloud resources. Pricing of cloud resources has become an interesting area of research and interest. The issue is how the cloud resources are being priced. Pricing of cloud resources and services must take several key aspects into consideration in a manner, so that it does not become a burden for cloud consumers. This paper highlights on some important key factors that better be considered while setting usage price of cloud resources.

Keywords: *Cloud Service Provider, COVID-19.*

Introduction

The cloud service providers (CSPs) used to provide different types of services to its customers. The services offered can primarily be categorized as – i) Software-as-a-Service (SaaS), ii) Platform-as-a-Service (PaaS) and iii) Infrastructure-as-a-Service (IaaS); or more broadly XaaS. One of the goals of CSPs is to maximize its revenue, while maintain a high level of quality of service (QoS) toward its customers. Achieving such a goal demands several factors to be considered.

Related Work

Several methodologies have been proposed over the years in the field of cloud resource pricing. One of the most common methods of cloud resource pricing is “pay-as-you-go” model [2]. That is, the consumer

has to pay only for what he/she uses or consumes. There are some other methods too. A multi-issue negotiation mechanism has been proposed to facilitate PTNs between cloudagents and trade-off between price and time slot utilities [7]. Besides these different pricing models, there are some key factors that may be considered while setting the price of cloud resources.

Key Pricing Issues

1. **Type of Users:** Here, I present a taxonomy of cloud users. This taxonomy is based on the several types of cloud consumers who belong to different groups (*fig 1.*) based on their role and responsibility in our society. Later, we will see the connection of such taxonomy with pricing of cloud resources.

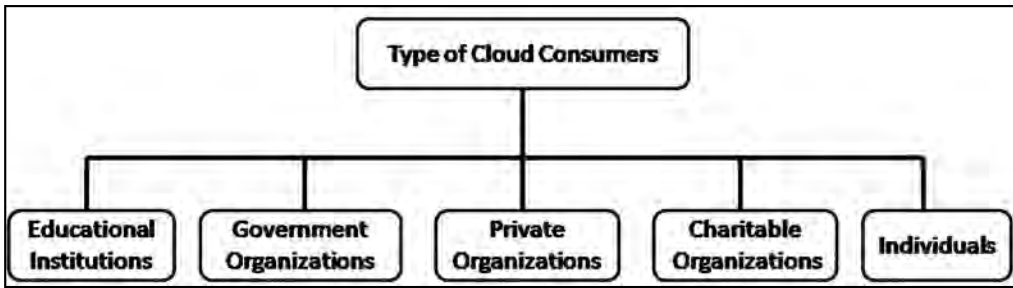


Figure 1: Taxonomy of Cloud Users

Here I suggest the pricing of cloud resources based on the type of cloud consumers. The CSPs must also consider the purpose for which the cloud resources are being used. For instance, the usage of cloud resources/services in educational institutions (schools, colleges, universities, research institutes etc.) is mainly aimed at teaching-learning & research purpose. In such cases CSPs may offer some mode of concession (scholarships). On the other hand, government sectors, military organizations are another type of cloud consumers for different purpose. Besides, small & medium private organizations, large business sectors and other individuals are also cloud consumers having a different scale of usages and purposes. Thus different groups of users exist and they have different purposes to use and explore cloud resources and thus different pricing models may be offered by the CSPs.

2. **Usage Time:** The pricing of cloud resources may also be charged based on the time in which it is being used. Within a day (24 hours), most of the cloud traffic (the peak hours) arises

during the time period say, 10AM -6 PM. To balance the load, the CSPs may offer variable pricing schemes depending on the cloud resource demand with respect to time of usage.

3. **Socio-Political and Economic Condition:** Cloud consumers are spread all over the world. For availability of cloud resources, CSPs expands data centers in different geographical parts across the globe. Pricing of cloud resources may consider the current social, political and economic condition of a region or country. States or countries may face an earthquake, cyclone, flood, pandemic (e.g. COVID-19) situations or other emergency situations. Such catastrophic and undesired conditions have an adverse effect on the entire society and especially on the economic condition of state/country. In such situations, cloud resource pricing may be revised by CSPs.
4. **'Happy Hours':** To attract more cloud users, CSPs may offer free usage hours. The idea is, beyond a certain time of usage, the next "X" hours of service will be provided by CSP as free of

cost. Usage on such duration may be designated as "Happy Hours" for cloud consumers. Such incentives not only surprises cloud consumers but also encourages using more cloud resources. This may also attract new cloud consumers too. This brings a competitive environment between CSPs in terms of retaining existing clients and acquiring new consumers.

5. **Less pricing for onsite cloud:** If cloud resources are installed and implemented at client's end [1], then pricing of cloud resources may be revised by CSP. Since accommodation for cloud infrastructure, security personnel, power usage and other associated infrastructural setup are being borne by client side; charging of cloud resources may to be revised.
6. **Women Empowerment:** To promote women empowerment, CSPs may introduce reduced pricing scheme of cloud resources for women users. Individual cloud users need to provide personal details to CSP, in order to access cloud resources. Such an initiative encourages women users in the field of education, business etc.
7. **Privilege for native employees:** CSPs may offer extra privilege/incentive of cloud resources to its own employees and his/her family members (spouse and children), to increase cloud consumers.

Conclusion and Future Scope

Besides the existing parameters of cloud resource pricing, this paper proposes

some additional constraints that may be considered by CSPs while charging for cloud resources and services. More and more researches will be done in the coming years. As the number and types of different resources and services will increase and vary, new aspects will come up in the cloud resource pricing. New pricing models will evolve and implemented by CSPs. Eventually it is up to the CSPs to follow a dynamic pricing model that is also suitable for cloud consumers.

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বাংলা বিভাগ

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‘গৃহবন্দী’ কথাটা প্রথম শুনেছিলাম বোধহয় ক্লাস ফাইভ বা সিক্সে। ১৯৪১ সালে নেতাজি সুভাষ চন্দ্র বসু-র ওপর নজরদারি করতে গিয়ে যেটা সেই সময় করেছিলেন ব্রিটিশ সরকার। তারপর বড়ো হবার সঙ্গে সঙ্গে বিভিন্ন দেশের ক্ষমতাচ্যুত রাষ্ট্রপ্রধান, সম্ভ্রাসবাদী নেতা অথবা জনগণকে সঙ্গে নিয়ে বিপ্লব করতে পারেন - এমন অনেকের সম্পর্কে এই কথাটা শুনেছি, পড়েছি খবরের কাগজে। কিন্তু আমার আপনার মতো সামান্য মানুষ অথবা আমাদের বাড়িতেও কাজ করতে আসা আমাদের মুখাপেক্ষী বেচারী মানুষদেরকেও গৃহবন্দী থাকতে হবে কোনোদিন - একথা কি ২০২০ সালের আগে আমরা কল্পনাতেও আনতে পেরেছিলাম? মার্চের মাঝামাঝি সময়ে প্রথমে সতর্কতা অবলম্বন করে বন্ধ করতে হলো স্কুল-কলেজ। তারপর ২২তারিখের জনতা-কার্য। আর তার পরের দিন থেকেই শুরু হয়ে গেলো এক অভূতপূর্ব পরিস্থিতির - যার পোশাকি নাম লক-ডাউন।

শিল্পাঞ্চল এলাকায় বড়ো হয়েছে। তাই সেখানকার অধিবাসী হিসেবে যখনই মুখোমুখি হতে হয়েছে একটা শব্দের - লক-আউট - দেখেছি বন্ধ হয়েছে একটার পর একটা কলকারখানা। এতোদিন এটাকেই ভয়াবহতার চূড়ান্ত বলে জানতাম। লকডাউন তাকেও ছাড়িয়ে গেলো। সকাল বেলায় ঘুম ভেঙ্গে উঠে দেখলাম - শুধু ছোটো-বড়ো সংস্থা নয় - স্তব্ধ হয়ে গেছে সম্পূর্ণ জনজীবন। বাড়ির সামনের রাস্তায় দাঁড়িয়ে অবাক হয়ে দেখলাম - রাস্তাটাকে এতোটা চওড়া কখনও মনে হয়নি। অবাক হয়ে ভাবছিলাম ঠিক তার আগের

সন্ধ্যায় যে ভিড় ঠেলে বাড়িতে ফিরতে হয়েছে - তার কথা। দোকানে দোকানে অসম্ভব ভিড় মনে করাচ্ছিলো সরস্বতী পুজো বা লক্ষ্মী পুজোর আগের দিনের ভিড় অথবা হালখাতার ভিড়। অথবা, হয়তো ঠিক সেরকম-ও নয়। লোকজন যা পাচ্ছে, হাতের সামনে তাই কিনছিলো। পরিকল্পনা করে নয়, অনেকটাই যেন আতঙ্ক-গ্রস্থ হয়ে। যতটুকু দরকার, ততটুকু নয় - আমাপা, যতোটা বহন করতে পারে। এক বয়স্কা মহিলাকে দেখেছিলাম চার কিলো মুড়ি কিনতে। দোকান থেকে বেরিয়ে নিজেই বলছিলেন - মিইয়ে যাবে - বেশিরভাগ মুড়িই মিইয়ে যাবে। কেনাকাটা করে পায়ে হেঁটে বাড়িতে বোধহয় সেদিন কেউই ফিরতে পারেন নি।

পরের দিন থেকেই জিনিসপত্রের দাম বাড়তে লাগলো হু-হু করে। চালের দোকানের মালিক বললেন - দাম বেড়েছে অনেক। দেখুন না সামনের আকালের মরশুমে দাম কোথায় গিয়ে দাঁড়ায়। ‘আকাল’ শব্দটা পড়েছি মাত্র ছাপানো অক্ষরে - এই প্রথমবার কাউকে আগামী দিনের অবস্থা বোঝাতে ব্যবহার করতে শুনলাম। যদিও দাম এইভাবে বেড়েই চললো না। বরং কমলো, এমনকি দু-একটা জিনিস বড়ো বড়ো বাজারে পৌঁছানোর উপায় কমে যাওয়ায় কমে এলো বেশ খানিকটা।

কলেজে ক্লাস বন্ধ হয়েছে তার একসপ্তাহ আগেই। ছেলেমেয়েরা লেখাপড়া করতে গিয়ে কোথাও সমস্যার মুখে পড়লে - ফোন করে, মেসেজ করে। সবটাই অসংগঠিত ভাবে। কখনও লেখা তৈরি করে ছবি তুলে পাঠায় - পরামর্শ চায়। উল্টো দিকে আমরাও কখনও কখনও ব্যক্তিগত ভাবে কাউকে কাউকে

কোনো প্রশ্নের উত্তর লিখে কোনো অংশের ছবি তুলে পাঠাই।

এরমধ্যেই একদিন অধ্যক্ষ মশাই অনুরোধ করলেন আমাদের দিক থেকে পাঠানো পাঠ্যাংশ যদি কলেজের ওয়েবসাইট-এ পাঠানো হয় - তাহলে অন্য অনেক ছাত্র এর সুযোগ হয়তো গ্রহণ করতে পারবে। এছাড়াও ছাত্র-অধ্যাপকদের নিয়ে তৈরি হয়েছিলো একটা হোয়াটস-অ্যাপ গ্রুপ। এই দুই জায়গাতেই পাঠানো শুরু হলো আমাদের পড়ানোর জন্য তৈরি লেখা-পত্র। এই করতে করতেই এক এক বিভাগের এক এক ক্লাসের জন্যে গড়ে তুলতে হলো আলাদা আলাদা হোয়াটস-অ্যাপ গ্রুপ। আর তারপর শুরু হয়ে গেলো কনফারেন্স কলের মাধ্যমে আলাদা করে অনলাইনে পঠনপাঠন। এই পথেই জীবনে প্রথমবার মুখোমুখি হতে হলো জুম, গুগলস মিট, টিমলিন্ক অথবা ফেসবুক লাইভ-এর।

ক্লাসঘর নেই, জমজমাট স্টাফরুম নেই, দীর্ঘ করিডোর নেই - নেই হাতে লেগে থাকা চকের গুঁড়ো আর অ্যাটেনডেন্স খাতা বা ডাস্টার। চোখের সামনে ছাত্র-ছাত্রীদের হৈ-হল্লা নেই, নেই ক্যান্টিন বা এবড়ো-খেবড়ো মাঠ অগ্রাহ্য করে ওদের এটা-ওটা খেলাধুলো করা। এখন শুধু বাড়িতে বসে একটা একটা করে নোটিশ পাঠানো - 'আমার আগামী ক্লাস হবে অমুক দিন - ঠিক তমুক সময়ে।

মার্চের শেষ সপ্তাহ থেকে তুমুল ক্লাস হতে শুরু হলো। কোনো রবিবার বা ছুটির দিন বাদ নেই। ধরতে গেলে রোজ-ই তো ছুটির দিন। তেমনি নেই কোনো ধরাবাঁধা দশটা-পাঁচটার চেনা ছক। অনায়াসে আমরা তখন জানিয়ে দিচ্ছি - ক্লাস হবে সন্ধ্যায় সাড়ে সাতটা বা আটটা থেকে। হিসেব করে দেখলাম ক্লাস হচ্ছে - কলেজ খোলা থাকলে যা হতে পারতো - তার চেয়েও বেশি। কখনও কখনও ক্লাসের সময় নিয়ে ঠোকাঠুকি লেগে যাচ্ছিলো। কখনও ছাত্ররা জানাচ্ছিলো - ঐ সময় তাদের পক্ষে সম্ভব নয়, কেননা ঐ সময় থাকবে তাদের অন্য বিষয়গুলোর জেনারেল ক্লাস। এরই মধ্যে কখনও কখনও বিভাগের অধ্যাপকদের মধ্যে বা কোনো নির্দিষ্ট কমিটির অধ্যাপকদের নিয়ে টেলি-কনফারেন্স করে জরুরি মিটিং।

এইভাবেই চলতে চলতে নিজের কাছেই উঠে এলো কয়েকটা প্রশ্ন। অনেকেই তো থাকছে -

কিন্তু সবাইকেই কি পাচ্ছি এই অনলাইন ক্লাসের বিপুল আয়োজনে? কলেজের অনেকগুলো বিভাগ - সমাজের বিভিন্ন স্তর থেকে উঠে এসেছে তাদের বাড়ির প্রতিনিধিরা। অনেকেই প্রথম প্রজন্মের পড়ুয়া। তাদের সবার কাছেই কি পৌঁছনো গেলো এই ভিডিও কনফারেন্সের মাধ্যমে? সবার কাছে কি আছে স্মার্টফোন - বা দীর্ঘসময় ধরে অনলাইনে থাকার মতো প্রয়োজনীয় নেটপ্যাক? ক্লাসের সবচাইতে মুখচোরা ছেলেটা বা মেয়েটাকে কি এই পরিকাঠামোর অভাবেই পরপর ক্লাসে দেখতে পেলাম না? - এর জবাব দেবে কে?

আবহাওয়ার কারণে দূরের গ্রামের ছেলেমেয়েদের মধ্যে ইন্টারনেট যোগাযোগ প্রায়ই বিঘ্নিত হচ্ছিলো। কখনও লজ্জা-জড়ানো কলমের মেসেজ আসছিলো - পরের ক্লাসটা অডিও-কলের মাধ্যমে নিলে ভালো হয় স্যার। বিনম্র এই আকৃতির পেছনের গল্পটা তখন স্পষ্ট হয়ে ওঠে। ভিডিও-কনফারেন্স থেকে তাই নেমে আসতে হলো কনফারেন্স কল-এ।

সকালে উঠে বাজারে যাওয়া। তারপর স্কুল-কলেজে ছেলেদের পাঠানো তার সঙ্গে নিজের তৈরি হয়ে বেরিয়ে পড়া - একটা নির্দিষ্ট ছন্দে তৈরি হয়ে গিয়েছিল শরীর-মন। সেখানে সপ্তাহে দুই-একবার কোনোরকমে বেরিয়ে দরকারি কাজটুকু সেরে - যতো তাড়াতাড়ি সম্ভব আবার নিজের আস্তানায় ফিরে আসা। মন হাঁফিয়ে উঠতে চাইলো। এক বন্ধু রসিকতা করে পোস্ট করলেন - 'আগে আমার নিত্য যাওয়া - শেয়ালদা টু ডানকুনি / এখন আমার গতিবিধি - বেডরুম টু ব্যালকনি !'

প্রথমে খবর পাওয়া গেলো - কলকাতায় সংক্রামিত একজন মানুষের খোঁজ পাওয়া গেছে। তারপর আস্তে আস্তে সংকট এগিয়ে এলো আরও কাছের এলাকায়। দেশজুড়ে লকডাউন অগ্রাহ্য করে সংক্রমণ ছড়িয়ে পড়লো কাছাকাছি - চেনাজানা এলাকায়। চোখের সামনে রাস্তার ওপর বাঁশের ব্যারিকেড তৈরি হলো। মানুষে মানুষে তৈরি হলো অবিশ্বাস। আশেপাশের আবাসনের গেটে পড়লো তালা। কেউ কারোর কাছে আকাঙ্ক্ষিত নয়। দৈবাৎ কোনো প্রয়োজনে কেউ কারোর কাছে দেখা করতে এলেও - পাশাপাশি মানুষের মধ্যে চোরা চাহনি।

এক বন্ধু পরামর্শ দিলেন - এই সময়টা লেখালেখি

করুন না। মন তো অবাধ্য হবেই - তাকে বশে আনুন। মনে মনে বললাম - লিখবো তো বটেই, কিন্তু ছাপবে কে? একের পর এক পত্রিকার নির্ধারিত সংখ্যা বাতিল হয়ে চললো। একসময় গুজব ছড়িয়ে পড়লো - সংবাদপত্রের মাধ্যমে ছড়িয়ে পড়তে পারে এই ভাইরাসের প্রকোপ। তাই আঘাত এসে লাগলো বহুল প্রচারিত সব সংবাদপত্রের ওপরেও। এমনকি আনন্দবাজার গেষ্টী বন্ধ করে দিলো তাদের নিয়মিত প্রকাশ - শুধু অনলাইনে প্রকাশ পেলো প্রায় এক সপ্তাহ। চেনাজানা পত্রিকার সম্পাদক সবিনয়ে জানালেন তাঁদের পত্রিকা প্রকাশের অপারগতার কথা। বললেন - চাইলে আপনার লেখা আপনি প্রত্যাহার করে নিতে পারেন - পরবর্তী সংখ্যা আমরা কবে প্রকাশ করতে পারবো - এখনই কিছুই বুঝতে পারছি না। আশ্বস্ত করলাম - কেন-ই বা ফিরিয়ে নেবো আর অন্য কোথাও কি কেউ আছে প্রকাশ করবার? এরমধ্যেই এসে হাজির হলো নববর্ষ। বইদিবস। শুনশান বইপাড়ায়।

নববর্ষ আর অক্ষয়তৃতীয়া - বেশ কয়েকদিন আগে থেকেই বাড়িতে আসতে শুরু করে আমন্ত্রণ জানিয়ে কার্ড। এবছর একটাও আসেনি। এইসময় বিকেলে নির্দিষ্ট দোকানে গেলে শুধু মিষ্টির প্যাকেট নয়, পাওয়া যায় বাংলা মাসের একটা ক্যালেন্ডার। এবার সেটা একটাও বাড়িতে আসেনি। বাড়িতে মহিলারা অশোক-ষষ্ঠী আর নীল-ষষ্ঠী পালন করলেন, বাড়িতে থেকেই। মন্দিরে এবার আর যাওয়া হয়নি। এর মধ্যেই এসে গেলো পবিত্র রমজান মাস। বাজারে এইসময় প্রচুর ফল-মূল পাওয়া যায়। বাজার এখন বাড়ির সামনে দাঁড়িয়ে থাকা কয়েকটা ভ্যান-রিক্সার ওপর নির্ভর করে আছে।

খবর আসে টিভি আর ইন্টারনেটের হাত ধরে। কোন কোন রাজ্যে মারাত্মকভাবে ছড়িয়ে পড়েছে সংক্রমণ সেই কথা। তার সঙ্গে, কোন কোন রাজ্যে বেড়াতে গিয়ে বা তীর্থ করতে গিয়ে বা চিকিৎসা করাতে গিয়ে আটকে পড়েছেন কতো মানুষ।

এদের মধ্যে সবচেয়ে বেদনার সংবাদ বয়ে আনে কাজ হারানো পরিযায়ী শ্রমিকদের অবস্থা। এতো রাজ্যের মানুষ যে এতো দূর-দূরান্তে জীবিকার তাগিদে ছুটে গেছিলো - ছুটে গেছিলো একটুখানি ভালোভাবে থাকতে পারার দুর্মদ আশায় - জানা ছিলো না যেন। বেপরোয়া হয়ে তাদের মধ্যে অনেকেই

হাঁটতে শুরু করে - ভারতবর্ষের একপ্রান্ত থেকে আর একপ্রান্তে। বৃদ্ধ-শিশু-অন্তসত্ত্বা মহিলা - কে নেই সেই মিছিলে। এদের ওপর মাঝপথেই কখনও কখনও নেমে আসে বিপর্যয় - যতোজন ফেরার পথ ধরে - আর অবশেষে যতোজন এসে পৌঁছায় - হিসেবটা মিলতেই চায় না যেন!

টিভিতে বিনোদনের চ্যানেলগুলো পুরোনো রেকর্ডিং দেখিয়ে দেখিয়ে আগ্রহ হারিয়ে ফেলে। সব আগ্রহ গিয়ে জমা হয় সংবাদ চ্যানেলগুলোর অনুষ্ঠানে। এই সুযোগে সংবাদ চ্যানেলগুলো বিভিন্নভাবে সাজিয়ে গুছিয়ে পরিবেশন করে বিভিন্ন সংখ্যাতত্ত্ব বিভিন্ন মতামত, বিভিন্ন দৃষ্টিভঙ্গিতে। হঠাৎ করেই পর্দায় ভেসে ওঠে কাজ হারানো শ্রমিকদের মুখ, ক্ষিদের কষ্ট পাওয়া শিশুর মুখ, অসহায় মায়েদের মুখ। ল্যাংটো বাচ্চার হাতে বাটি, রোগশয্যা বৃদ্ধ-বৃদ্ধা - হাত জোড় করা।

হয়তো তার ঠিক পরেপরেই কোনো সুস্বাস্থ্যের অনুষ্ঠানে কোনো পুষ্টিবিদ বলে চলেন - ইমিউন বাড়ানোর খাদ্যের তালিকা। পাশাপাশি চ্যানেলে হয়তো প্রোটিন-রিচ খাবার বানানোর রেসিপি বলছেন কোনো রন্ধনপটীয়সী। আবার ঠিক তার পাশের চ্যানেলেই হয়তো আপনি মুখোমুখি হয়ে যেতে পারেন কোয়ারান্টাইন সেন্টারে থাকা কোনো ছোট্ট হাতে একটা বিস্কুটের প্যাকেট আঁকড়ে ধরে রাখা কোনো শিশুর।

সকাল থেকেই যে সমস্ত ফেরিওয়ালা আমাদের বাড়ির আশেপাশে ঘোরাফেরা করে - তাদের প্রায় কাউকেই আমি কখনও বাজারে বসে জিনিস বিক্রি করতে দেখিনি। এদের মধ্যে অনেকেই বন্ধ হয়ে যাওয়া ছোটো ছোটো উদ্যোগের শ্রমিক, কেউ কেউ গৃহবধূ। যিনি ফল বিক্রি করছেন, তিনি - এটা ভালো, মিষ্টি হবে - ছাড়া ফলের জাত-গোত্র সম্পর্কে আর কিছুই জানেন না। যিনি মাছ বিক্রি করছেন - তাঁর অনভিজ্ঞ আঁশ ছাড়ানোর ধরনেই বোঝা যায় - তিনি এবিষয়ে একেবারেই আনকোরা। খুব ভয়ে ভয়ে থাকি, যদি আমার পরিচিত কাউকে এর মধ্যে দেখে ফেলি!

জানলা দিয়ে যেটুকু দেখা যায়, দেখি। এছাড়াও খোলা রয়েছে বিভিন্ন মিডিয়ার ভুবনজোড়া জানলা। তাতেও যা দেখতে পাই ভয়ে বুক কঁপে ওঠে। গাজিয়াবাদ, পুনে, বেঙ্গালুরু বা কাটপাড়ি স্টেশনের

বাইরে ফেরার জন্য অপেক্ষা করে থাকা মানুষ জানে না - কবে নাগাদ তারা ফিরতে পারবে। সারা দেশের বিভিন্ন প্রান্তের পারফর্মিং আর্টসের লোকজন, লোকশিল্পের সঙ্গে যুক্ত লোকজন জানেন না কবে আবার তাঁরা তাঁদের নৈপুণ্য দেখানোর সুযোগ পাবেন জনতার কাছে। বাড়িতে বসে আটঘন্টার জায়গায় বারোঘন্টা কাজ করে চলেছে যে তথ্য-প্রযুক্তির কর্মী, সেও জানেন না ঠিক কোন মুহূর্তে ঐ ল্যাপটপের মাধ্যমেই ভেসে আসবে, তার টার্মিনেশন লেটার। ব্যক্তিগতভাবে এদের আমি চিনি না। আবার কে জানে, এদের মধ্যেই হয়তো রয়েছে আমার প্রাক্তন ছাত্র-ছাত্রীরা !

এই সময়ের মধ্যেই কতো মানুষ নেমে পড়েছেন ত্রাণের কাজে। আমাদের কলেজ থেকে উদ্যোগ নিয়ে অধ্যাপকরা তুলে দিলেন তাঁদের বেতনের কিছুটা অংশ - এটা তো সামান্য কথা। অধ্যাপকদের সংগঠনের পক্ষ থেকেও তুলে দেওয়া হয়েছে সংগৃহীত অর্থ। ব্যক্তিগতভাবে পরিচিত পরিসরে অনেকেই সাহায্য করেছেন - অথচ যাঁরা কোথাও সেটা প্রকাশ করেন নি। তবুও, শ্রদ্ধা জাগে তাঁদের জন্য - যাঁরা এই লকডাউনকে স্বীকার করে নিয়ে দিনের পর দিন চালিয়ে যাচ্ছেন তাঁদের কর্মকাণ্ড দুঃস্থ মানুষের সাহায্যার্থে। হ্যাঁ, গর্ব হয়, এদের মধ্যেও রয়েছে আমার বেশ কিছু বর্তমান ও প্রাক্তন ছাত্র-ছাত্রী।

সরকার চেষ্টা করছেন। চেষ্টা চালিয়ে যাচ্ছেন সরকারি বেশ কিছু দপ্তর - যেমন স্বাস্থ্য, আরক্ষা, নিকাশি বিভাগের কর্মীরা। চেষ্টা চালাচ্ছেন ব্যাঙ্কিং, বিদ্যুৎ ডাক ও প্রশাসনের সমস্ত কর্মী ও আধিকারিকরা। চেষ্টা চলছে আমাদের শিক্ষা দপ্তরের কর্তাদের মধ্যেও - ঘন ঘন বৈঠকের মধ্যে খোঁজা হচ্ছে কিভাবে বেরোতে পারে এই অপচয় হয়ে যাওয়া সময়ের সমাধান-সূত্র।

জীবনেও যেন সময়ের গুরুত্ব কমে আসে। কেউ বলেন, একটা ভালো বই পড়ছিলাম, জানেন - তাই রাতে আর ঘুমালাম না। ভোররাতে শেষ করলাম। আগামীকাল তো আর অফিসে যাওয়ার ব্যাপার নেই। দুপুরের দিকে কাউকে ফোন করলে ফোন বেজেই যাচ্ছে - কুড়ি-পঁচিশ বছর একটানা কাজ করে যাওয়া মানুষ পরে রিং-ব্যাঁক করে লজ্জা-লজ্জা গলায় বলছেন - আসলে একটু ঘুমিয়ে পড়েছিলাম।

এরই মধ্যে ফোন আসে বন্ধুদের, আত্মীয় স্বজনের - যাদের সঙ্গে দীর্ঘদিন ধরেই দেখা-সাক্ষাৎ নেই এমন কিছু মানুষের। ফেসবুক পেজে ফ্রেন্ড রিকোয়েস্ট পাঠায় তিরিশ বছর আগে ইউনিভার্সিটির হোস্টেলে পাশাপাশি কাটিয়েছি - এমন সব সহপাঠী - সহমর্মী। খোঁজ খবর নেয় এখন কোথায় থাকি কী করি - এইসব। কেউ জানতেও চায় না - এখন কেমন আছি। যেন - প্রশ্নগুলো সহজ আর উত্তর-ও তো জানা !

এরই মধ্যে অনিবার্যভাবে চলে আসে পঁচিশে বৈশাখ। অধ্যাপকদের পক্ষ থেকে উদ্যোগ নেওয়া হয় অনলাইনে দিনটি উদ্‌যাপন করার। বাড়িতে বসে অনেকেই পাঠিয়ে দেন তাঁদের নিজের নিজের বিভিন্ন নৈপুণ্যের সাক্ষর - রবীন্দ্রনাথকে ঘিরে। তারপর সেটি সম্পাদিত করে পোস্ট করে দেওয়া হয় ইউটিউবে। এই উপলক্ষে অনেকের সঙ্গে অন্তত চোখের দেখাটুকু হয়। অন্য কলেজের সহযোগী অধ্যাপকরা উৎসাহ দেন। আর আমাদের কলেজের ছাত্র-ছাত্রীরা উৎফুল্ল হয়ে জানায় - খুব ভালো হয়েছে, স্যার। এরপর আসে পরিবেশ দিবস - কলেজের জাতীয় সেবা প্রকল্পের পক্ষ থেকে ছাত্র-অধ্যাপক যৌথ উদ্যোগে আয়োজিত হয় আরও একটা অনলাইন প্রযোজনা।

অথচ, এমন একটা অনুষ্ঠান তো ছাত্র-ছাত্রীদের নিয়েই করার কথা ছিলো। বাংলা বিভাগের পক্ষ থেকে আয়োজন করা হয়েছিলো প্রায় দুই মাস ব্যাপী 'গল্প লেখার কর্মশালা'। দুমাসের মধ্যে বারোদিন ছোটো-বড়ো বিভিন্ন সাক্ষাৎকারের মধ্যে সম্পূর্ণ হতো এই অনুষ্ঠান। নির্ঘণ্ট তৈরি হয়ে গেছিলো। জেলার অন্যান্য কলেজের ছাত্র-ছাত্রীদের থেকেও এসেছিলো এই কর্মশালায় যোগদানের অনুরোধ। আমরা যতদূর সম্ভব, সেটা গ্রহণ-ও করেছিলাম।

১৪ই মার্চ, শনিবার দুপুরে বিশ্ববিদ্যালয়ের কর্মসমিতির বৈঠকে যখন কলেজগুলোর পঠন-পাঠন সমেত সমস্ত ক্রিয়াকলাপ বন্ধ রাখার সিদ্ধান্ত নেওয়া হয় - ঠিক সেই মুহূর্তে-ও আমাদের ছাত্র-ছাত্রীরা ব্যস্ত ছিলো কর্মশালার উদ্বোধনী অনুষ্ঠানের প্রস্তুতিতে। আর্টপেপার, রঙিন কাগজ, থার্মোকলের সিট নিয়ে সে এক দক্ষযুক্ত ব্যাপার। তাদের কাছে অনুষ্ঠান স্থগিত রাখতে বলা যে, কতোখানি কঠিন ছিলো, সেটা শুধু অনুমান করা যায় মাত্র। কেউ কেউ তো হতাশায় কেঁদেও ফেলেছিলো।

জানি, এইসব কথা কোথাও লেখা হবে না। পরবর্তী দিনগুলোতে আসতে চলেছে যে, কঠোরতর বাস্তবতা - তার কাছে এইসব অনুভূতি নসি় মাত্র। তবুও ওদের দৌড়াদৌড়ি ভুলতে পারি না। ক্লাসঘরের দেওয়াল থেকে সেমিনার রুমের দেওয়াল ; ঘর ঝাঁট দেওয়া থেকে মঞ্চের সাজসজ্জা - সব দায়িত্ব যারা হাসিমুখে পালন করছিলো - তাদের সেইদিন রাতে অনেকবার মেসেজ পাঠিয়েও ঠিক মতো সামলাতে পারিনি।

তারপর থেকে তো আমরা নিজেরাও গৃহবন্দী। এক বয়স্ক নিকটাত্মীয় তার আগের দু-সপ্তাহ ধরে বিভিন্ন হাসপাতালে ভর্তি ছিলেন। জনতা-কার্ফুর আগের দিন বন্ডে সই করে তাঁকে ছুটি করিয়ে নিয়ে আসা হয়েছিলো বাড়িতে। কয়েক দিন পর বাড়ির একের পর এক সদস্য আক্রান্ত হলেন চিকেন-পক্স-এ। কোনো ডাক্তার দেখাতে পারিনি। শুধু ফোন মারফত ডাক্তারবাবুকে জানিয়ে ওষুধ খাওয়ানো হয়েছে। ওষুধের দোকানের সামনেও বেশ কিছু মানুষের লাইন।

এরমধ্যেই ভেসে আসে কিছু মন ভালো করে দেবার মতো খবর। পরিচিত মানুষদের একটা সংস্থা পিপিই কিট তৈরি করতে শুরু করেছে, সেখানে পুনর্বাসন পেয়েছেন বেশ কিছু অন্যত্র কাজ হারানো মানুষজন। ঘরমুখী পরিযায়ী শ্রমিক আর পথশিশুদের হাতে খাবার তুলে দিচ্ছেন কিছু পরিচিত মানুষ। আশেপাশের ভবঘুরে বা রেশনিং সুবিধা বঞ্চিত মানুষের মধ্যে খাবার বিলি করছেন আরও কিছু সংগঠন। এরা কেউ বাড়িতে বাড়িতে এসে চাঁদা চাইছেন না, বরং স্বতস্ফূর্তভাবে মানুষ এসে সাহায্য করে যাচ্ছেন এই প্রচেষ্টায়। গর্ব অনুভব করছেন - এইরকম উদ্যোগের সঙ্গে যুক্ত হতে পেরে।

ভোরবেলায় এখন প্রায়ই ঘুম ভেঙে যায়। আমার শোবার ঘরের পাশেই ছোট্ট একমুঠো বাগান। সেখানে ভোর চারটে - সাড়ে চারটে থেকেই পাখিদের জলসা শুরু হয়ে যায়। পায়রা, গাঙশালিখ, ডাহুক, বুলবুলি, ছাতারে, কাঠঠোকরা, ফিঙে, মাছরাঙার দল নানান সুরে তাদের উপস্থিতির জানান দেয়। সারাদিন বাগানে ছটোপুটি করে অজস্র কাঠবিড়ালি আর বেজির দল। রাত গভীর হলে চুপিসারে একটা ভাম আসে। মাঝরাতে হঠাৎই ডেকে ওঠে কোনো

একলা কোকিল। কোথায় কোন সৈকতে যেমন আবার দাপিয়ে বেড়ায় লুপ্তপ্রায় ডলফিনের ঝাঁক।

বাড়ির কচিকাঁচাদের বাড়িতে আটকে রাখা এইসময় খুবই কঠিন হয়ে ওঠে। বাড়িতে থেকে ইলেকট্রনিক স্ক্রিন থেকে দূরত্ব বজায় রাখা - আরও কঠিন কাজ। অনাগত দিনের কথা ভেবে তাদের নানাবিধ তালিম দেবার চেষ্টা চলে। এইসব তালিমের একটা বিচ্ছোরণ দেখা যায় সোশ্যাল মিডিয়ায় রবীন্দ্র-জয়ন্তী উপলক্ষে। কিন্তু সেখানেই তো শেষ নয় - লকডাউন এগিয়ে চলে তৃতীয় থেকে চতুর্থ পর্যায়ের দিকে। বাড়িতে ছেলেদের চুল বেড়ে ওঠে। অনভ্যস্ত হাতে তখন বড়োদের কাঁচি ধরতে হয়। কোথাও উল্টোটাও যে হয় না - এমনটা অবশ্যই বলা যাবে না।

প্রথমে যখন একলগে বেশ কিছুদিনের জন্য কর্মবিরতি ঘোষণা হলো, তখন আত্মসুখী মনে কোথাও কি একটু স্বস্তির নিঃশ্বাস ফেলার কথা মনে হয়েছিলো? মনে কি হয়েছিলো - কর্মবাস্ত জগতের থেকে একটু মুক্তি পেয়ে পরিবারের সদস্যদের সঙ্গে একটু বেশি সময় ধরে থাকার সুযোগ পাওয়া যাবে? কিন্তু, তারপর সেই সুযোগ ক্রমশই প্রলম্বিত হতে থাকলো। আরও, আরও বেশি দিন ধরে। ছুটি তো শুধু কর্মক্ষেত্র থেকে হলো না, হলো সামাজিক সমস্ত উৎসব-অনুষ্ঠান থেকেও। কতোজনের বেড়াতে যাওয়ার টিকিট কেটেও তা বাতিল করতে হলো - সে তো নিতান্তই ছোট্ট একটা ঘটনা। বাতিল করতে হলো বিয়ে, অন্নপ্রাশন, জন্মদিন পালন থেকে বিভিন্ন সভা, সমিতির পূর্ব ঘোষিত হাজারো অনুষ্ঠান। সত্যজিৎ রায়ের জন্ম-শতবার্ষিকীও পালিত হলো অনলাইনে। সিনেমা-থিয়েটার-বিত্তানুষ্ঠান যে কবে আবার ফিরে আসবে - কেউই বলতে পারছেন না। তবে, সমাজতাত্ত্বিকরা বলছেন এই দীর্ঘ লকডাউন চলাকালীন সময়ে সবচেয়ে যেটা বেড়েছে, সেটার নাম - ‘ডোমেস্টিক ভায়োলেন্স’।

অনেক দিন আগে কবি সুজিত সরকার লিখেছিলেন - ‘দেওয়াল তুলে দিলে ঘর / ভেঙে ফেললে পৃথিবী।’ ক্ষুদ্র এই পরজীবী আমাদের চোখে আঙুল দিয়ে দেখিয়ে দিলো, আমাদের নিজেদের জগতের মধ্যেই আমরা কতোরকমের দেওয়াল তুলে রেখেছি। আমরা তো স্বঘোষিত, স্বনির্বাচিত এক নিজস্ব কোটরেই বন্দী ছিলাম - আজকে যার

পোশাকী নাম দেওয়া হয়েছে - কোয়ারেন্টাইন। দূরত্ব সৃষ্টি করার ইতিহাস তো একদিনের নয় - আমরা নিজেদের অনন্যতা বোঝাতে তো এতোদিন এই দূরত্ব সৃষ্টি করতেই চেয়েছি। প্রকৃতির দিকে মুখ ফিরিয়ে থেকে চেষ্টা করেছি প্রকৃতির সবটুকু উপভোগ করতে পারার চক্রান্ত।

এর মধ্যেই এলো একদিন প্রচণ্ড ঘূর্ণিঝড়। যার পোশাকি নাম - আমফান। নিজেদের পাকা বাড়ির নিশ্চিত নিরাপত্তার মধ্যেই কেঁপে কেঁপে উঠলাম বারবার। প্রবল বর্ষণে ঘরের ভেতর ঢুকে এলো জল। খবর আসতে থাকলো সহকর্মীদের কাছ থেকে, তাদের এলাকায় ঘটে গেছে কতোটা বিপর্যয়, কতোটা প্রাকৃতিক তান্ডব। কিন্তু, এর বাইরে যাদের খোঁজ খবর পেলাম না, যাদের মাথার ওপর টিনের চাল উড়িয়ে নিয়ে গেছে ঝড় - যাদের কাঁচা বাড়ির ওপর উপড়ে পড়েছে বড়ো গাছ - যাদের বাড়ির পাশের নদীতে বাঁধ ভেঙে লোনা জল ঢুকে পড়েছে সর্বত্র - তাদের আর খোঁজ পাওয়া গেলো না। নিজেদের কারেন্ট নেই, জল নেই, টেলি-সংযোগ বিচ্ছিন্ন - এই অবস্থাতেই আক্রান্ত হয়ে থাকলাম পরবর্তী কয়েকটা দিন। বিচ্ছিন্ন হয়ে পড়লাম বলে - খোঁজ নেওয়া হলো না, পাশে দাঁড়ানো হলো না। মানুষ তো বিপদের সময়-ই আশা করে অপর মানুষের বাড়িয়ে দেওয়া হাত। করোনা-র আবহে আমরা কি সামাজিক বিচ্ছিন্নতার আর একটা ভয়াবহ

পরিণতির রূপ দেখতে পেলাম - আমফানের সূত্রে ?

এই গৃহবন্দী জীবন সেই আসল আমি-র সঙ্গে প্রকাশ্য আমিকে দেখা করিয়ে দিলো মাত্র। এখন ফিরে যেতে ইচ্ছে করে সেই লম্বা করিডোরের পথ ধরে - যেখানে কোনো ক্লাস থেকে হঠাৎই কয়েকটি মেয়ে বেরিয়ে এসে জানতে চাইবে - ‘এখন একটা ক্লাস নিয়ে নেবেন, স্যার !’ ফিরে যেতে ইচ্ছে করে সেই ক্লাসঘরের ভেতরে - যেখানে অনেক দিন পরে আসা লাস্ট বেঞ্চের সেই ছেলেটা তার সামনের সারির পেছনে মুখ লুকিয়ে থাকার চেষ্টা করছে। সেই ছেলেটার হাতে চক ধরিয়ে বোর্ডের সামনে নিয়ে এসে দাঁড় করাতে চাই আমি। খুঁজে বের করতে চাই তার দুর্বলতা। সেটা দূর করতে না পারলে, পুরো ক্লাস একসাথে নিয়ে এগোতে পারবো না যে ! শুনেছি, পুরো কলেজ স্যানিটাইজ করা হয়েছে। ছেলেমেয়েদের ডেকে এখনো পর্যন্ত জিগ্যেস করতে পারিনি যে, ওদের হাতে তৈরি করা ঘর সাজানোর উপকরণগুলো, ওদের তৈরি দেওয়াল পত্রিকা ওরা ঠিক মতো গুছিয়ে রেখেছে কিনা। কলেজের সামনের মাঠ মানুষের স্পর্শ না পেয়ে আবার জঙ্গলে রূপান্তরিত হয়ে গেছে কিনা - জানিনা তাও। এই মৃত্যুর উপত্যকা পেরিয়ে এক রোদ ঝলমলে সকালে সত্যিই খুব তাড়াতাড়ি একদিন ঐ কলেজের প্রাঙ্গণে গিয়ে দাঁড়াতে চাই - প্রিয় ছাত্র-ছাত্রীরা যেখানে সমস্বরে আমাদের ‘সুপ্রভাত’ জানাবে।

করোনা টিভু আর আদিবাসী আরিচালি

জামাদার কিস্কু

সাঁওতালী বিভাগ

গভর্নমেন্ট জেনারেল ডিগ্রি কলেজ, সিঙ্গুর

নোণা ধারতী জাকাত রে গোটা পাড়া হুড়ুর
বিজলী মালকা কানা দিশম জাগাত হল চুল, দুল দুলাউ
চাবা আকানা। সানাম কঁড় খন আড়াং তারকো রাকাব
কানা করোনা করোনা...

করোনা দো চেৎ কানা? করোনা দো অকয় কানায়
করোনা দো চিলী কানায়। করোনা দো তিনঃ লাটু আর,
করোনা দো নোণা জেগেত রেয়াঃ জতখন মারাং
আজার কানা। নোণা আজার তে জেগেত জাকাত হড়
হপন কো বতর তে লুকুদ লুকুদ চাবা আকানাকো।
করোনা দো জেগেত রেন সানাম হড় হপন কো মিদ হর
ডাহার তে আয়ুর আর সুতুঃ আকাদ বনায়।

চেদাঃ সে করোনা দ সানাম লেকান জাতি ধরম
বর্ণ রূপ এমান দো হিন্দু, মুসলমান, জৈন, খ্রিস্টান,
সিখ, সারনা, এমান ধরম দো বায় বাছাও এদ কোওয়া।
করোনা যুগনি দ বায় বাছাও আ জাতি পারিস, ধরম
অনাতে উনি দ সানাম ধরম আজার কানায়।

করোনা দব মিত উচাড় নাচাডান আজার কানা।
অনা খন বাধগাও লাগিত তে জত খন মারাং উপায় দো
হড় হপন তালারে সাগিঞ সাগিঞ তাঁহে কাতে লাগতি
কো পুরন হুয়ক আ। মু মচা দো সাফা লুগড়িতে আর
বাং খান মাস্ক তে উপার এসেদ তাঁহেন জারুড়া। তি
কদো মিদ ঘন্টা পর পর সাবুন সাফা হুয়ু আ। মিদ মিটার
সাঁগিঞ রে তাঁহে কাতে গাপাল মারাও হুয়ু জারুড়া।
আডি বাড়তি লাগতি তাঁহে লেন এনাং গে বাহরে
উড়ুকো মা। খুঃ মাদাক হড়মো বাড়তি লেলো লেনখান
ডাক্তার আ দিস হুদিস হাতাও আডি জারুড়া।

যাঁহায় যদি নোণা করোনা আজার এগাম লেখান,
উনি রুগি দো একলা আড়াক রে দোহো হুয়ক আ।
অন্ডে গে উনি রুগি দো একলা গে তাঁহে কাতে ডাক্তার
চিকিৎসা রান মুরগান হুয়ু আ। জম ঞু, থারি বাটি
নিজেতে সাফা সুসার আর লুগড়ি লাপো সাফা সুসার
আডি লাগতি। উনি রুগি তাহেন ঠাঁও দো দিনাম
সেনি টাইজ হুয়ক লাগতি। আগিল হাপড়াম কো দো
নোণা লেকান মহামারী আজার দো কো আয়ো রুতা
লে কান জাঃ জটেত আজার মেনতে কো বাডায় এদ
তাঁহেদ। উন অকু দো ফাণুন বোঙ্গা পারোম চালাও
এনখান গে নংকান উচাড় নাচাডান আজার কো দিসম
রে পাসনাও বাড়ায়া। নোণা আজার কো ঞেগল কাতে
নোণা আজার খন বাধগাও লাগিত তে নিজেতেগে
আডি সন্তর তাঁহেন আকো।

আদিবাসী কো দো জাহের রে বাহা বোঙগা
মাড়াং নায়কে রাচারে বঙ্গা কো হাকরাও কোওয়া
ডাকরাও কোওয়া। আর ডিহীরে ডাহি রে আতু রে
টলা রে নাড়া পিড়া, রোগ বিগিন, সানাম লেকান
জাঙ্গে দারাম এটকে টেড়ৈ কো ঞেগল ঠাওকা গটায়।
ইনা তায়ম জাহের রে বাহা কো বঙ্গায়া অন্ডে দ জাহের
এরা মারাং বুরু মঁড়ে কো তুরুয় কো, লিটা গাঁসাঞ
এমান কো বঙ্গা আকোয়া উনি দো বির বুরু দারে নাড়ি,
এমানরে নাওয়া গেলে নাওয়া জো এমান কো নাপায়
তে বাহা কোঃ মাঃ গেলে কোঃ নামায়তে বাহা কোঃ
মাঃ গেলে কোঃ মা, জো কঃ মা। নোণা বাহা বঙ্গা
সেটের লেনখান গে আতু অড়াক কো গেজ গুরিজ

ফারচায়া লুগড়ি লাপো কো তিকি সবদ ফারচায়া।
জাহের হঁ ক ফারচায়া, বোঙ্গা অড়াগ হঁক দালোবো।
বোঙ্গা কো কো উম কোওয়া নাড়কা কো আক। নোণ্ডা
বঙ্গা বুরু অঙ্কে সানাম আতু জাকাত হড় কো তাঁহে
কো-আ। অডে বঙ্গা বুরু অঙ্কে কারি গায় গুরিজ
তেকো গেজ গুরিজ সাফায়া তুরসি দাঃ কো ইরচি
আচুরা। ধুপ ধুঁড়া কো লাগাও আ। নোওয়া দো বঙ্গা
বুরু ঠাঁও কো জাতি তালয়া আর কো শুদ্ধয়া নোণ্ডা
দো আডি নিরড় ঠাঁও কানা।

জাহের আয়ো দো দাউড়া দিপিল কাগ আয় আর
জনক তে জগ ফুরচা সাফা ইদিয়ায়। আজার বেমার
বাড়িজা কো সাহায়ায়া। নোণ্ডা পরমপরা দো আগিল
হাপড়াম কো কোরেখন গে আরিচালী রায়রিত কো
চলন আগু আকাদা।

করোনা আজার খন বাঞ্চাও লাগিত আবো
সানাম কো মিদ কাতে ক্রিয়া আতাও হুরুক তাবোনা
নোওয়া আজার দো আলোপে বতরাগ আ। মেনখান
আবো আদিবাসী কোণাক আরিচালী মানাও বাতাও
কাতে গে লাগা ঞ্জির -হুয়ুক আ। সাফা সুসার রে ধ্যান
দো হো হুয়ুক আ। জম ঞ্জু রে ধ্যান দোহো হুয়ুক আ।
প্রকৃতিচে ধারতি আয়ো কলে রে তাঁহে কাতে জম ঞ্জু
অঙ্কে সাসাঙ, নিম, তুরসি সাকাম, কাড়ি বুহু, কো জম
ঞুরে ব্যবহার মা। আর জাঁহায় ঠেন করোনা আজার
রেয়াগ লরুণ ঞ্জেল লেনখান উনিদ ভেগার অড়াগ
রে দোহো রেয়াগ বন রিকায় মা। আর অডে গে রান
মুরগান কো ব্যবস্থা হায়মা। নোংকা কামি লেখান
আবো নোওয়া জেগেত রে পাসনাও কান আজার খন
আডি আলগা তে জিৎকার দাড়েয়াগ বন।

যখন নোওয়া জেগেত জাগাত রেন মানণ্ডা কো
বতর তে লুকুদ লুকুদ আকো উন যোহো আদিবাসী
কোণাক আরিচালী রায়রিত খন চেদোক রেয়াগ ক
রিকায়। আদিবাসী কো দো দুঃখ হারকেত বেড়ারে
হঁ এনেজ সেরেঞ কাতে পারাব পুনায় কো মানাও
বাতাওয়া। নোওয়া আরিচালী তাল্য তেগে আদিবাসী
কো রেন আগিল হাপড়াম কো কো সেরণ্ডা আগু
আকাদা যে আজার বেমার দো কুসি রাস্কা তাঁহে কাতে

গে সাহা আ আর দুঃখ দাঁদি হঁ সাহা গিডি আ। অনাতে
নোণ্ডা করোনা আজার খন বাং বতর কাতে তিঙ্গু
দারাম কাতে লাগা ঞ্জির হুয়ুক আ।

দেস দিসম রে করোনা ভাইরাস তিজু সে
আজার তে দিসম জাকাত রে হুলচুল আকানা। গোটা
পাড়ারিন মানমি কো বতর তে জিন্তী কো মিদ কোচা
কঁড় রে গুণ্ডদ কাতে মেনাঃ কোওয়া। দিসমরে আয়মা
হোড়াগ ভেগার ভেগার কাথা কো লাই সদর এদা।
মেনখান বাস্তব রে সাফা সুসারতেগে লিচাড় খাদস
মনে দ জিয়াড় রুয়াড় উতারোক আ। সাফা সুসার দো
আতু অড়াগ খন এহব কাতে শহর বাজার হাবিজ সাফা
সুসার লেখান নেওয়া আজার সাঁও লাড়হাই কাতে
জিতকারোক রেয়াক মনেরে জিওরে দাড়ে হিজু আ।
আতু টলা, সাঁওতা সমাজরে নোণ্ডা আজার রেয়াক লায়
লীপাই প্রচার প্রসার হুয়ুক মা। হাতে সানাম হড় কো
খো দাড়েয়াগ মা মেস্তে।

সাফা সুসার আর বাপাডায় লাগিদ, তে সাঁওতা
আরি হড় হপন কো তালারে সাবধান আর সাফা সুসার
কাতে চেঙঘা লেকা খান, আবো নোণ্ডা দিসম লাগিত
আডি মারাং ভালাই কামি হয় দাড়েয়াগ আ। আবো
সাঁওতা রে নোওয়া মারসাল তারাস রাকাব হিজুঃ আ।

আদিবাসী কোণাক কো আরি চালি লেকাতে
জতখন মারাং দ হুয়ুক কানা গড জহার। আদিবাসী
মানণ্ডা কো দো পেড়া পাইঁড়া কো হিরী হিপিরী অঙ্কে
আর বাং নাওয়া পেড়া হিজু অঙ্কে উনকুদ পেরেজ
লটা দাঃ দড়ম কাতে গড জহার কাতে পেড়া পাইঁড়া
বন দারাম কোওয়া। উনকুদ তি জাঙ্গা আর মেং হাও
কো আপ হুতুম, আরুপ সাফা কাতে এনা অডাক কো
বলনা। উনকু দ তি তি এটাক হড় কো সাঁও তে বাং
জাঃ জটেত কাতে গে স্টোগিঞ খন গে গড জহার
কাতে কো সাগুন দারাম কোওয়া। আর হঁ আদিবাসী
কোওয়া দো পারাব পুনায় অঙ্কে আর বাং হাপ্তাকিয়া
দিন রে অডাক দুয়ার কো গেজ গুরিজ আর সাঁও
সুর সুপুর ঠাঁও কো হঁ গেজ গুরিজ সাফা কাতে এনাং
গে সানাম লেকান সাগুন কামি কো সুসারা। নোণ্ডা
দ আগিল হাপড়াম কোওয়া আকিলতে আর উমান

কাতে গে নোঙা সেরঙা তেয়ার আকানা, আর নিত হঁ চালাও হিজু কান গেয়া।

আদিবাসী কো দ পাহিল দো ছুত ছাটিয়ার বেহা বাপলা গজ গুর ভান্ডান কোডাক এমান সাঁওতা আরি কামি অন্তে জম ঞু কো দ সারজম সাকাম পাতড়া ফুডুক কোরে গে জম ঞু দ হুয়ুঃ আ। নোঙা দো প্রকৃতি রে হোঁ জাহান বাড়িজ অরসগু দো বাড় পাড়াও আ। আর জাং জটেদ রে তিজু চে ভাইরাস রেয়াক উচাড় নাচাড় রেয়াক ভয় বতর হঁ বাং তাহেন।

আর হোঁ অনকা গে আদিবাসী কো দ পাহিল খন গে লুগড়ি লাপো দ তরজ তে তিকি সবদ রেয়াক বাড়তি চল তাঁহে কানা। বঙ্গা বুরু আর বাং আউড়ি দিন রে হঁ লুগড়ি লাপো দ তিকী ফুরচা কাতে গে হরঃ বাঁদে এদ তাঁহেন আকো। জাতে যাহান আজার বেমার আর বাং তিজু এমান কো আলোকা জানাম দাড়েয়াক মা মেস্তে।

আর হঁ আদিবাসী কো দ নিতহঁ বহক উপ দ নাড়কা হাসা তে কো নাড়কা ফুরচা এদ তাহেন। অনা নাড়কা হাসা দো উনাক বরড়া জে বহঃ রে সি আর উপায়াস এমান কো হঁ বাকো তাহেনা। উপ হঁ সাদম চাঁওর লেকা আডি জিলিঞ আর পিরিল পিরিল নাসে হয়

তেগে অটাঙ বাড়য়া। হড়মো অজ গা অনাতে হড়ম রেয়াক মাইলা হঁ বরড় উডুক আ।

সেতাক বেরেদ তরা সানাম আদিবাসী কো গে দাতানি ফুরচা লাগিদ নিম করঁজ কুজরি দাঁইহা সারজম এমান কো ব্যবহার এদ তাঁহেন। অনাতে ডাটা হঁ পড়য় পড়য় সাফা আ। রিঙ্গুত হঁ বাকো জম আ। আর ডাটা হঁ আডি কেটেজ তাহেনা আর লাগে ঞুর হঁ বাঙ ঞুর হদ আ।

নোঙা ক সানাম লেকান জম ঞু এমান কো হঁ প্রকৃতি সাঁও জড়াও তাঁহে কানা। অনাতে আদিবাসী কো দো বির বুরু রেয়াক ফল পাকড় আড়াক সানাম আলু বাঁওলা এমান কো গে চাঁদোঃ কিয়া ভেগার ভেগার জ বিলী কো জম ঞু এদ তাহেন। ঞেলে দুমুর, লুতি, তেরম এমান কোণাক রাসা চেপেজ কাতে হড়ম জিওয়ী কো নিফুট দোহো এদ তাহেন। নোঙা কো গে আদিবাসী কোওয়াক আরিচালী।

নোওয়া আরিচালী কো সানাম ধারতী জাকাত রেন মানগা কো মানাও বাতাও কাতে সাগুন আর সনত ডাহার পাঞ্জা কাতে গে নোঙা করোন তিজু চে জেগেৎ জাকাত আজার বেমার খন জিওয়ী বাধগও রেয়াক সনত হর ডাহার দ।

ভান্ডান কোভান

করোনার কবলে

মহঃ কুতুবুদ্দিন মোল্লা

বাংলা বিভাগ

গভর্নমেন্ট জেনারেল ডিগ্রি কলেজ, সিন্ধুর

"বিশ্বের আলোকনুগু তিমিরের অন্তরালে এল মৃত্যুদূত চুপে চুপে;"

["প্রান্তিক", রবীন্দ্রনাথ ঠাকুর]

আমাদের দেশে এই 'মৃত্যুদূত' করোনা ভাইরাস ২০২০ সালে চুপে চুপে এসে আজ সর্বগ্রাসী হয়ে উঠেছে।

প্রথম যেদিন শোনা গিয়েছিল প্রধানমন্ত্রীর ঘোষণা – করোনা-বিভাডনে একদিনের জনতা-কারফিউ; সেদিন মানুষ ততটা ভয় পায়নি--ঘরে বসে বেশ আনন্দেই ছিল। পরের দিনই মুখ্যমন্ত্রীর ঘোষণায়--চব্বিশ দিনের গৃহবন্দীর কথায় আঁতকে ওঠার অবস্থা! যানবাহন ও মানুষের স্তব্ধতায় নিস্তব্ধতা—সুনসান--প্রশাসন তৎপর! বাড়ির সিংহদ্বার রুদ্ধ! আত্মীয়-পরিজন ও কর্মক্ষেত্র থেকে সবাই বিচ্ছিন্ন; আধমরা মনে সবাই রুদ্ধশ্বাসে ভাবছে কবে খুলবে সব! চব্বিশ দিনের অপেক্ষায় থাকতে থাকতে আবার বাড়লো আঠারো দিন--তারপর থেকে বেড়েই চলেছে ক্রমান্বয়ে--আমরা অসহায়, শঙ্কিত মৃত্যুভয়ে; মানুষ মেনে নিয়েছে, মানাচ্ছে তাদের মনকে! দু'বেলা মরার আগে মরে-থাকার দুর্বহ ভার, অনিশ্চিত জীবন আর কতদিন চলবে বা চালাতে পারবে জানি না। কথায় বলে – 'যেখানে বাঘের ভয় সেখানে সন্ধ্যা হয়'। জনতা-কারফিউ বা লকডাউন ঘোষণার আগে পর্যন্ত অনেক মানুষই জানতো না করোনার কথা কিংবা জানলেও ভীত-সন্ত্রস্ত ছিলই না। কিন্তু এখন এমন অবস্থা যে বাড়ির বাইরে রাস্তায় নামতেও আতঙ্কে-হৃদকম্পন শুরু হয়। খুব প্রয়োজনেই অতিসতর্কতায়

বিধি-নিষেধ মেনে বের হয়ে বাড়িতে ফিরে পরিশুদ্ধ হওয়া। এরকম চলছে তিন মাসাধিক, জানা নেই আর কতদিন চলবে! কোথায় এর শেষ।

মানব-জীবনেতিহাসে নানা সময়ে নানা ভাইরাসের প্রকোপের কথা জানা গেছে; শোনা গেছে মহামারী ও মড়কের কথা। সেসব ভাইরাসের দ্বারা মানুষ এখনো সংক্রমিত হয় – তবে ততটা ব্যাপক বা মারী-মড়কের আকারে নয়। করোনা নামক ভাইরাস পৃথিবীর মানুষের কাছে এই প্রথম বিস্ময়। কোনো পশু-পক্ষী, কীট-পতঙ্গ থেকে নয়, মানুষবাহিত এই ভাইরাসে মানুষকেই দেখে মানুষের ভয়। এ এক অভিনব অদ্ভুত ভাইরাস – ভয়াবহ আতঙ্ক।

করোনা-ত্রাস বিশ্বত্রাস। একে মহামারী, অতিমারী যা-ই বলা হোক না-কেন, এ এক অভিনব মারী। এ মরণ-রোগ ও মারণ-রোগ, বড়ই ভয়াবহ ও চরম আতঙ্কের। মানুষকে দেখে দূরে দূরে থাকতে হয় মানুষকে। এ ভাইরাস আপন মানুষকে করেছে পর, নির্ভীক মানুষকে করেছে ভীত-সন্ত্রস্ত, আত্মীয়-পরিচিতকে করে তুলেছে সংশয়ী, কাছে বসিয়ে বা ঘরে ডেকে আপ্যায়নে এনেছে চরম ভীতি, মানবতাকে ধ্বংস করে মানুষ হয়ে চলেছে চরম অমানবিক! শুধু দূরত্ব বজায় রেখে দূর থেকে হাত নেড়ে কেমন আছে জানা ছাড়া মানবতা ও মানবিকতার আর কিছু আছে কি! মানুষের গৃহবন্দীত্বে ও যানবাহনের চাকার

সুন্দরতায় ত্রস্ত পৃথিবী বড় অসুস্থ--বাঁচার কামনায় বিজ্ঞানমুখী এবং ঈশ্বরমুখীও। উদার আকাশ ও মুক্ত বাতাস থাকলেও মানুষের নেই মুক্ত জীবন, স্বস্তি-শান্তি। চারদিকে শুধু নিরন্তর মৃত্যু-মিছিল, আক্রান্তের ক্রমসংখ্যাবৃদ্ধি, হৃদয়-কাঁপানো শিরহণ! মানুষের নীরব-দিনগুলি পার হয়ে যাচ্ছে মৃত্যুর মৌন-আহ্বানে!

এই ভাইরাসের কারণে পৃথিবীর বড় দুঃসময় এখন! বিশেষ বিশেষ দু'হাজার বিশ মানুষের জীবনের দুর্বিষহ বিষ। ভবিষ্যতে এই পৃথিবীর মানুষ যতদিন থাকবে এই বিশেষ বিষক্রিয়া ভুলবে না কখনো। এই বছরটি পাণ্টে দিয়েছে চলার পথ, জীবনরেখা, সৃষ্টি করেছে মানুষকে দেখে মানুষের ভয়। হিরোসিমা নাগাসাকির মতো মানুষের মনে থেকে যাবে আতঙ্ক! সারা পৃথিবীর এ এক দুরপনয় ক্ষত, অনপনয় আতঙ্ক।

করোনা-ভাইরাসের কবলে মৃত্যু-মিছিলের সঙ্গে পাল্লা দিয়ে চলছে মৃত্যু-ক্ষুধা! বেতনভুক গৃহবন্দী মানুষ বুঝবে না তাদের ব্যথা। সাধারণ মানুষ কোনো কাজে যোগ দিতে পারছে না, বিশেষ করে লকডাউনে যানবাহনের চাকা স্তব্ধ হওয়ায় গ্রামের মানুষ রুজি-রোজগারের সন্ধানে জীবিকা-নির্বাহে আসতে পারছেন না। গ্রামেও কাজ নেই, কোনোক্রমে তারা শহর-মফঃস্বলে এলেও কাজ পাচ্ছে না। মেন-গেটের তালোও কেউ খুলছে না। কেউ কোনো কাজ করাচ্ছে না এবং কাজের মানুষ কাজ পাচ্ছে না। তাহলে তাদের সংসার চলবে কী করে? কথায় বলে ক্ষুধা মানুষকে অন্ধ করে দেয়, অনেক সময় হিতাহিতজ্ঞানশূন্যও করে দেয়। তাই এখন তারা করবে কী? প্রথমে ভিক্ষা, পরে চুরি-ডাকাতি ইত্যাদি।

মানুষের মৃত্যু আগেও দেখেছি
যন্ত্রণার গোঙানি ওঠে ভিতর থেকে
নিরন্ন কণ্ঠের আলোড়ন ঠেলে সরে গেছি
সভ্যতার গহ্বরে
কিনারাহীন আকাশজ্ঞার স্রোতে বহমান
মানবতার ধ্বজা।

বাস্তবিকই স্পর্শ লাগার ভয়ে অনেকেই সাহায্যপ্রার্থীকে সরাসরি কিছু দিতে ভয় পাচ্ছে। করোনা-ত্রাসের এই মর্মান্তিক দৃশ্যও দেখতে হচ্ছে আমাদের! হয়তো কোনো কোনো স্পর্শে কিছুই হতো

না কিন্তু আতঙ্কে মানুষ হয়ে পড়েছে বড়ই অমানবিক।

স্বচ্ছা নির্বাসনে অনিতক্রম্য প্রহর
জীবনের সোনালি স্বাদের পড়ন্ত বিকেলে
দিশাহীন বিবর্ণ মন নিয়ে
আর একবার পৃথিবীর কষ্ট-দীর্ণ মানুষের মুখ ভুলে
একার মতো রাতটি পেরিয়ে যাওয়ার বাসনা...

তৃতীয় বিশ্বযুদ্ধ হলে সারা পৃথিবীতে যে ধ্বংসাত্মক পরিণতি নেমে আসতে পারে, এখন করোনায় যেন তারই ট্রায়ালিং চলছে পুরোদমে। মানুষের মরণ-বাঁচনের ত্রস্ততায় এক বৈশ্বিক সংকট এনে দিয়েছে করোনা। আমরা জানি ভারত থেকে হাইড্রক্সিক্লোরোকুইন আদায় করার জন্য আমেরিকার রাষ্ট্রপতি ডোনাল্ড ট্রাম্প কখনো আবেদন-নিবেদন করেছেন আবার কখনো বা ভীতি-প্রদর্শনও করেছেন। এ যেন দিশাহারাচিত্তে বউকে বলা 'গরু হারালে এমন হয় গো মা'।

এই বৈশ্বিক বিপর্যয়ে মারণ-রোগ আমাদের জীবন থেকে নির্মম ভাবে কেড়ে নিয়েছে মুক্ত-মনে ধর্মাচরণ, দেশ-বিদেশ ভ্রমণ, আত্মীয়-স্বজন-পরিজন-প্রতিবেশির সঙ্গে স্বতঃস্ফূর্ত ও ঘনিষ্ঠ মিলন; অনাকাজ্জিত সামাজিক দূরত্ব কেড়ে নিয়েছে মানুষের স্বতঃস্ফূর্ততা, আশা-ভালোবাসা, মনের বাসনা! চিরকাল ধর্মীয় বিধান ও ধর্মীয় স্তোকবাক্য মানুষকে শান্ত-সংযত ও বিশ্বস্ত করেছে, দিয়েছে সুরক্ষা। মানুষ নতনেত্রিচিতে তা গ্রহণ ও পালন করে আসছে। কিন্তু এই করোনা বাঁচনকামী মানুষের সেই বিশ্বাসেও হেনেছে কুঠারাঘাত। এমনকি মানুষের স্বার্থেই নিষিদ্ধ হয়েছে আন্তর্জাতিক যাতায়াতের মাধ্যমও।

সবচেয়ে চরম দুর্দশায় ও দুর্ভোগে পড়তে হয়েছে পরিযায়ী শ্রমিকদের। সংসারের ক্ষুণ্ণ-নিবৃত্তির জন্য যে দরিদ্র মানুষ ভিন রাজ্যে কিংবা বিদেশে কাজ করছিল, আচমকা লকডাউনে তারা পড়লো চরম বিপাকে ও সংকটে। বাড়িতে ফেরার সময় ও সুযোগ পায়নি এবং যেটুকু সামর্থ্য ছিল তা দিয়ে প্রথম দফার সময় কাটিয়ে বাড়ি ফেরার মানসিকতা হয়তো ছিল। কিন্তু ক্রমান্বয়ে উপর্যুপরি লকডাউনের মেয়াদ বৃদ্ধিতে তারা নিঃস্ব-অসহায় ও কিংকর্তব্যবিমূঢ় হয়ে পড়ে। পরে না খেতে পেয়ে বাঁচার কামনায় স্বদেশে-স্বরাজ্যে-স্বগ্রামে ফিরতে গিয়ে কি নিদারুণ

বিপর্যয় ও দুর্ভোগে পড়তে হয়েছে তাদের—তা কারো অজানা নয়! মৃত ও মৃতপ্রায় পরিযায়ীদের ফরিয়াদ শুধু উর্ধ্ব আকাশে-বাতাসে রণিত হয়েছে; আর কিছু স্বার্থান্বেষী মানুষ একে-অপরকে দোষারোপ করে দায়িত্ব ও কর্তব্য এড়িয়ে পিঠি বাঁচিয়েছে! অথচ বাড়ি ফেরার আশাবাদী মানুষগুলোর নিদারুণ-মর্মান্তিক মৃত্যু-দুর্ভোগ—এমনকি রাস্তায় সন্তান প্রসব করার মতো যেসব খবর আমরা সংবাদ মাধ্যমের মাধ্যমে জানতে পারি তা বর্ণনাতীত। প্রশাসনও এব্যাপারে সবরকম সুব্যবস্থা তাদের দিতে পারেনি। এজন্য আমরা লজ্জিত! জনতা-কারফিউর পর মাঝে তিন-চারদিন বাইরের রাজ্যে থাকা পরিযায়ী শ্রমিকদের বা বাইরে ছড়িয়ে-ছিটিয়ে থাকা মানুষজনকে স্বস্থানে আসার সুযোগ দিয়ে তাদের কোয়ারেন্টাইনের ব্যবস্থা করে লকডাউন বলবৎ করলে হয়তো মানুষের জীবনে এমন চরম বিপর্যয় ও অমানবিক পরিণতি নেমে আসতো না! সেসময় করোনা আক্রান্তের সংখ্যাও এতটা প্রবল ছিল না। কিন্তু এখন যা অবস্থা—পরিস্থিতি সামলানো কষ্টকর! এখন পরিযায়ী শ্রমিকের অবাধ আগমনে গ্রামেও প্রভাব ফেলেছে করোনা—বাড়ছে আক্রান্তের সংখ্যা। এই পরিযায়ীদের উপযুক্ত কোয়ারেন্টাইনের ব্যবস্থা নিলে হয়তো কিছুটা সুরাহা হতে পারতো! কিন্তু লকডাউনের শিথিলতায় ও সবকিছু খুলে যাওয়ায় সর্বত্রই বাঁধ-ভাঙা জলের মতো উপচে পড়ছে জনতার ভিড়। এ হেন দেশের অবস্থা যেন চালুনি করে জল আনা আর হাত দিয়ে যতটা সম্ভব ছিদ্র সামলানোর চেষ্টা করা!

তিন মাসাধিক লকডাউনেও করোনা-আক্রান্তের সংখ্যা কমেনি; বরং বেড়েই চলেছে চক্রবৃদ্ধিহারে। প্রতিষেধকের বালাই নেই, প্রতিকার-প্রতিরোধেরও কোনো ব্যবস্থাই নেই! শুধুমাত্র আন্তর্জাতিক যাতায়াতের মাধ্যম ব্যতিত হঠাৎ করে মাস্কের ব্যবহার ও সামাজিক দূরত্ব বজায় রেখে বেড়ে গেল লকডাউনের সীমা। খুলে গেল দোকান-পাঠ, হাট-বাজার, অফিস-আদালত, চলতে শুরু করল বাস-অটো-টোটো-প্রাইভেট কার। কার্যত 'সোসাল-ডিস্ট্যান্স' নেমে গেল 'জিরো'তেই। উপর্যুপরি বেড়েই চলেছে আক্রান্তের সংখ্যা।

আসলে অধিকাংশ মানুষ 'সামাজিক দূরত্ব' বুঝলেও মানছে না। আবার মাস্ক পরলেও ব্যবহারের

নিয়মই জানে না। কেউ নাক বের করে রেখেছে, কেউ শুধুই গলায় ঝুলিয়ে রেখেছে, কেউ খুলে পকেটে রাখে এবং কিছুক্ষণ পরে আবার পরে, বাড়িতে এসে ধোয়ও না। একই পোশাকে ঘুরে বেড়াচ্ছে সর্বত্রই। তারা জানেই না যে, এতে করোনা তো দূর হবেইনা, বরং বেশি করে তা দ্রুত ছড়িয়ে পড়বে। জনসংখ্যার সবচেয়ে বেশিরভাগ মানুষের হাল এরকমই বেহাল!

করোনা-প্রতিরোধে লকডাউন আসলে 'বজ্র-আঁটন ফস্কা-গেরোর' মতো অবস্থা। প্রশাসন সব দিক দিয়ে তৎপরতা দেখালেও বেশির ভাগ মানুষ এ ব্যাপারে সতর্ক ও সচেতন নয়। সমস্ত যানবাহনাদি হঠাৎ বন্ধ হওয়ায় অর্থনৈতিক দিক দিয়ে দুর্বল ও পঙ্গু হতে থাকছে দেশ! না-খেতে পেয়ে বিপাকে পড়ছে অগণিত মানুষ। তবু ভালো লাগতো যদি এতে দূর হতো করোনা। খুব সূক্ষ্ম-বিচারে দেখা যায় এই করোনা বিদেশাগত। আর বিদেশ থেকে মানুষ শহর বা মফঃস্বলে আসে বেশি। তাই মনে হয় প্রথম পর্যায়ের লকডাউনের সময়সীমায় শহর ও মফঃস্বলবাসীকে ১০০% গৃহবন্দী করতে পারলে, এমনকি তাদের বাজার-হাটসহ জীবনধারণের ন্যূনতম ব্যবস্থা নেওয়া হলে করোনা এতো বেশি পরিমাণে ছড়াতো না। এই কাজে একটু সময় দিতে হতো, খরচ ছিলইনা। কেননা, শহর ও মফঃস্বলের বেশির ভাগ মানুষেরই আর্থিক স্বচ্ছন্দ্য আছে, আছে বাঁচার তীব্র কামনা। তাই অর্থের বিনিময়ে তাদের কাছে খাদ্যসামগ্রী পৌঁছে গেলে তাদের আর বাজার-হাট বা জনবহুল এলাকায় যেতে হতো না এবং হয়তো করোনা এত দ্রুত ও ব্যাপক হারে ছড়াতো না। সমীক্ষায় দেখা যাবে পরিযায়ী শ্রমিকদের আগমনের আগে পর্যন্ত অধিকাংশ গ্রামেই করোনার কোনো প্রকোপই দেখা যায়নি। তারা নির্বিন্দে ছিল। আতঙ্ক থাকলেও প্রভাব ছিল না। অনেক গ্রামে করোনার ভয় ও সতর্কতা ছিলই না। কেননা, সেই গ্রামে এই ভাইরাস তখনো পর্যন্ত প্রবেশ করেনি বলেই তারা নিরাপদ ছিল। তবে তারা এব্যাপারে এমন উদাসীন ও বেপরোয়া যে; দেখলে অবাক লাগে। অনেক সময় দেখা যায় মাস্ক পরা কাউকে সেখানে দেখলে তারা মনে মনে হাসেও। তবে এখন তাদেরও সেই অবস্থার কিছুটা পরিবর্তন ঘটেছে। নিকটস্থ বেশ কিছু মৃত্যু তাদের মধ্যেও আতঙ্ক বাড়িয়েছে। কিন্তু করবে কি! পেটের

তানে ছুটতে হচ্ছে বাইরে কাজের সন্ধানে। মানুষের না-থেতে পেয়ে মরে যাওয়ার যন্ত্রণায় মানুষ করোনার ভয়কেও উপেক্ষা করে চলেছে কাজ করতে। কেননা, শুরুতে তারা যেভাবে বিভিন্ন ভাবে সাহায্য পেয়েছিল, এখন আর পাচ্ছে না। তাই বাঁচার লড়াইয়ে নেমে পড়তে বাধ্য হয়েছে বিভিন্ন কর্মক্ষেত্রে।

মনে পড়ে যায় জীবনানন্দ দাশের '১৯৪৬-৪৭' কবিতার কথা। দাঙ্গার অব্যবহিত পরেই হিন্দু-মুসলমানের আচরণ ও দৃষ্টিভঙ্গি তুলে ধরতে বলেছেন— “পরস্পরে আড় চোখে পরস্পরকে দেখে। ” করোনা-বিধ্বস্ত বিশ্বের মানুষেরও এখন সেই অবস্থা! তবে ঐ কবিতায় তিনি বলেছেন—“এ জীবন ধীরে ধীরে বীতশোক হয়। ” আমরাও চরম আশাবাদী। একদিন কেটে যাবে করোনা-ভাইরাসের আতঙ্কের তমোনিশা, বাঁচার কামনায় মরিয়া মানুষ শীঘ্রই আবিষ্কার করবে এর প্রতিষেধক। আমরা দেখতে পাবো নতুন আলোর মুখ, বাঁচার দিশা। আর আমাদের পরস্পর বিচ্ছিন্ন হয়ে ‘একঘরে’ জীবন কাটাতে হবে না; সবাই নির্বিঘ্নে একসঙ্গে চলতে পারবো, থাকতে পারবো। এব্যাপারে সরকার ও প্রশাসনকে আরও বেশি সক্রিয় হতে হবে, জনতাকে বিধি-নিষেধ ও আইন মেনে চলতে বাধ্য করতে হবে। তবে মানুষ সতর্ক ও সচেতন না হলে তাও ফলপ্রসূ হবে না। উপযুক্ত প্রতিষেধক আবিষ্কারের আগে পর্যন্ত প্রত্যেকটা মানুষেরই উচিত নিজের স্বার্থে, আত্মীয়-পরিজনের স্বার্থে, সমাজের স্বার্থে, দেশের স্বার্থে নিজেকে সচেতন ও নিয়মবদ্ধ থাকা। যেভাবে ডাক্তার-নার্স-স্বাস্থ্যকর্মী-আশাকর্মী-পুলিশ-প্রশাসনের কর্মীরা নিরন্তর ও নিরলস চেষ্টা চালিয়ে যাচ্ছে, সেইভাবে সমস্ত মানুষ করোনা-প্রতিরোধের বিধি-নিষেধ যথার্থভাবে পালন করে চললে এবং অন্যদেরকেও উদ্বুদ্ধ করলে আমরা খুব শীঘ্রই দেখতে

পাবো করোনামুক্ত বিশ্ব—দূর হবে বৈশ্বিক সংকট, আতঙ্কমুক্ত হবে বিশ্বমানব।

'কান্ডারী হুশিয়ার' কবিতায় কবি নজরুল ইসলাম বলেছেন-

"এ তুফান ভারী, দিতে হবে পাড়ি,

নিতে হবে তরী পার ।।

তিমির রাত্রি মাতৃমন্ত্রী সাক্ষীর সাবধান।"

করোনা প্রতিরোধে আমাদের সবাইকেই সাবধানতা ও সতর্কতার প্রয়োজন।

" মহানগরীর মৃগনাভি ভালবাসি।

তিমিরহননে তবু অগ্রসর হ'য়ে

আমরা কি তিমিরবিলাসী ?

আমরা তো তিমির বিনাশী

হতে চাই

আমরা তো তিমির বিনাশী।"

[জীবনানন্দ দাশ, 'তিমির হননের গান', " সাতটি তারার তিমির"]

ভয়াবহ করোনার কবলে মানুষের জীবনে আজ যে তিমির অন্ধকার নেমে এসেছে তার বিনাশে বিশ্ববাসীর অবিরাম চেষ্টা অবশ্যই ফিরিয়ে আনবে সুদিন-স্বাভাবিক-স্বতঃস্ফূর্ত জীবন।

"রাত্রির তপস্যা কি আনিবে না দিন?"

মানুষের সতর্কতায় ও সচেতনতায় একদিন কেটে যাবে আমাদের স্বাভাবিক জীবন-যাপনের সমস্যা। আমরা বিভিন্ন মারণ-রোগের অন্ধকার দুর্দিন কাটিয়ে উঠে একদিন জীবনের স্বচ্ছ সুদিনে উপনীত হবো। মানুষ আশাবাদী। আমরা আশাবাদী। সেই আশা-ভরসাই আমাদের পাথেয়।

বিষয় করোনা : সাম্প্রতিক কবিতার বয়ানে

নবনীতা বসু

বাংলা বিভাগ

গভর্নমেন্ট জেনারেল ডিগ্রি কলেজ, সিঙ্গুর

দৃশ্য এক : প্রথমে ‘জনতা কারফু’, তারপর একুশ দিনের সম্পূর্ণ ‘লকডাউন’ ঘোষণার বেশ কয়েকদিন পর নিত্য প্রয়োজনীয় চাল-ডাল কিনতে গিয়ে দেখি সামাজিক দূরত্ব বজায় না রেখে কিছু বিতশালী মানুষ নিজেদের প্রয়োজন অতিরিক্ত খাদ্যদ্রব্য বাড়িতে মজুত করতে তৎপর হয়ে উঠেছে, আর সেদিনই রাতের অন্ধকারে চোখে পড়ে গাছের নিচে পরিত্যক্ত প্যাকেটে একজন ছাপোষা মানুষ তন্নতন্ন হয়ে কিছু খুঁজছে। বুঝতে ভুল হল না মানুষটা কী খুঁজছে। খাবার নিয়ে যাওয়ার আগে মানুষটি মিলিয়ে গেল নিয়ন আলোর ধূসরতায়। মধ্যবিত্তীয় মননে তীব্র যন্ত্রণার দলা নিমিষে পাকিয়ে ওঠে। আগে কোনোদিন নিজেকে এত অসহায় লাগে নি।

দৃশ্য দুই: প্রথম দফার লকডাউনের প্রায় শেষের দিকে একজন কাজহারা মানুষ বিপর্যস্ত, বিধ্বস্ত অবস্থায় সাইকেল চালিয়ে বাড়িতে এসে বলছেন, ‘১০০ টাকা হবে?’ ‘গত তিনদিন পরিবারের কেউ খেতে পায় নি’, ‘সবাই অভুক্ত’, মনে করার চেষ্টা করলাম এর আগে কখনো এমন অভিজ্ঞতা হয়েছে কিনা!

দৃশ্য তিন : দ্বিতীয় দফার লকডাউনের শুরুতেই প্রতিবেশীকে রাতারাতি পুলিশ এসে তুলে নিয়ে গেল। শুনতে পেলাম তিনি সাতদিন ধরে জ্বরে ভুগছিলেন। অথচ আজও সকালে তিনি থলে হাতে বাজার করতে গিয়েছেন। বাড়ির সবাই হোম কোয়ারেন্টিনে। ‘সোসাইটি’র লোকেরা মৃত্যুভয়ে দরজায় খিল তুলেছে। মধ্যবিত্তীয় মুখ আয়নার মুখোমুখি দাঁড়িয়ে, নিষ্প্রাণ মহানগরের মৃত্যুভয় কি এতটাই গহন, গভীর!

‘পৃথিবীর গভীর গভীরতর অসুখ এখন’^(১) - ব্যক্তিগত অভিজ্ঞতা ও সোশাল মিডিয়া থেকে প্রাপ্ত সংবাদ উপলব্ধির সূত্রে বুঝতে পারছি আমরা এখন এক দুস্থিত সময়ে পৌঁছেছি যেখানে জীবনের তাৎপর্য এক কঠিন প্রশ্নের সম্মুখীন। সংকট-শূন্যতা-উদ্বেগ-অজানা আশঙ্কা-নিরাশার নিস্তেল অন্ধকারে মানুষের পৃথিবী দাঁড়িয়ে আছে নিরাবয়ব প্রান্তিক সীমানায়। আজ পৃথিবীর পথ ও পাথেয়, যাত্রা ও গন্তব্য অনির্দেশ্য ঘড়ির কাঁটার তালে দৌল্যমান। কারণ এক মারণজীবাণু আমাদের চিন্তায়-চেতনায়- চর্চায় অহরহ তৈরি করে চলেছে নিশ্চিন্তহায়নের জটিল জট। মুছে দিচ্ছে নিরুদ্বেগে জীবন কাটানোর স্বপ্নগুলো। বিশ্বায়িত আবহে এই অভিঘাত অস্বীকার করা সম্ভব নয়। মারণরোগের সন্ত্রাসে আক্রান্ত মৃত্যুত্যাড়িত মানুষের পৃথিবী সময়ের কাছে দায়বদ্ধ। জীবন ও মৃত্যুর চৌকাঠে দাঁড়িয়ে তবুও মানুষেরই চিন্তার ভুবনে দেখা দিচ্ছে প্রতিরক্ষার নানা কৃৎকৌশল আবিষ্কারের নতুন উদ্যম। অনেক কিছুর মতো আধুনিক সুরক্ষা বিষয়ক নতুন জিজ্ঞাসা যেমন আবিষ্কৃত হচ্ছে তেমনি দৈনন্দিন জীবনের বাধ্যবাধকতায় এগুলি প্রয়োগের প্রশ্নচিহ্নও পুনরুত্থাপিত হচ্ছে।

একবিংশ শতকের দ্বিতীয় দশকের প্রারম্ভে ভৌগোলিক সীমারেখাকে নস্যাত করে ‘নিঃশব্দ ঘাতক’ তথা মারণজীবাণু প্রত্যেক দেশের অন্দরমহলে উপস্থিত হয়েছে। জীবাণুটির নাম সার্স কোভিড-১৯ বা করোনা। ব্যাধিটি সংক্রামক। প্রত্যক্ষ বা পরোক্ষ ব্যক্তির দেহে সংক্রামিত হয় মূলত চোখ, নাক, মুখ থেকে হাঁচি বা কাশির সঙ্গে জলবিন্দু বাহিত হয়ে। এই সূত্রে চিকিৎসাশাস্ত্র ও বিজ্ঞানের নানা ব্যাখ্যান-- করণীয় ও অকরণীয় নানা

নিদানকে আমরা আত্মস্থ করছি, বিশ্লেষণ করছি, পুনঃসংজ্ঞায়নের দ্বারা নতুন সংজ্ঞা দিচ্ছি। পরীক্ষা-নিরীক্ষার অনিবার্য জটিল তথ্য ও তত্ত্বের অমীমাংসিত বিতর্ককে সরিয়ে রেখে যদি আমরা একে মানবিক পরিবেশ-ভাবনার বৃহত্তর প্রেক্ষিত বিবেচনা করি তাহলে দেখব আমাদের সাহিত্য-সাংস্কৃতিক চিন্তাবিশ্ব আজ এর গতি ও প্রবণতার নিয়ন্ত্রণাধীন। বিশ্ব-ইতিহাসে তাকালে আমরা দেখতে পাব প্লেগ, কলেরা, নানা ধরনের মারণ জ্বরের প্রাদুর্ভাব ভূগোল ও ইতিহাসের তাৎপর্যকে গ্রহণ করে সাংস্কৃতিক চেতনার অংশ হয়ে উঠেছিল। পুরানো প্রাদুর্ভাবের সঙ্গে গঠনগত সাদৃশ্য না থাকলেও নতুন এই সংক্রমণের হলকায় দহিত হওয়া দেশ-কাল-পাত্র যে সাহিত্য-সংস্কৃতির ভুবনে নিজস্ব ঘরানায় স্থান করে নিয়েছে তা অস্বীকার করার জায়গা নেই এবং একথা নিশ্চিত করে বলা যায় আমাদের চলমান ইতিহাসের পাঠককে সামনে রেখে জীবাণুযুদ্ধোত্তর কালও নতুন নতুন অভিজ্ঞানে সমৃদ্ধ হয়ে উঠবে।

একবিংশ শতকীয় মারণব্যাপির সংক্রমণ বিশেষ কোনো ইঙ্গিতবহু কিনা, এ নিয়ে বিতর্কের অভাব নেই। তবু একথা অনস্বীকার্য যে আধুনিক বীক্ষা অন্বেষণে বস্তু-পৃথিবী যতই মানুষের করতলগত হচ্ছে ততই প্রকট হয়ে উঠছে সৃষ্টির মধ্যে বিনাশী বীজের অঙ্কুরোদগম। সামাজিক-সাংস্কৃতিক রাজনৈতিক-অর্থনৈতিক ক্রিয়া-প্রতিক্রিয়ায় যে বিচিত্র জটিল বহুকৌণিক সহাবস্থান কিংবা বিচ্ছেদ বিশ্ব রাজনৈতিক ইতিহাসের পটে ক্রমশ প্রকাশিত হচ্ছিল তারই অভিব্যক্তি আজ জীবাণুযুদ্ধের আবহে স্পষ্টাকারে মুদ্রিত হল। যা ছিল অপ্রত্যক্ষ, ক্রমাশ্বয়ে তা সহজবোধ্য হল তামাম বিশ্ববাসীর কাছে। ফলত বিশ্ববাসীর মনন-বিশ্বে কিছু প্রশ্নের সূত্র ধরে জন্ম নিয়েছে কূটাভাসের গর্ভমুখও।

সময়ে-সময়ান্তরে স্থলিত হয়ে পড়েছে পুঁজিবাদী-সাম্রাজ্যবাদী চিন্তাবৃত্তির পঙ্গুতা, অক্ষমতা ও অপূর্ণতা। দুর্নিবার হয়ে উঠছে আত্মবিনাশের অনুভবমালা, মগ্নচেতন্যে অতিমারীর দাপট। নিজেরই মুদ্রাদোষে একা হতে হতে কোথাও যেন মনে হয়েছিল এত আনন্দ ভালো না, এত প্রচারের জৌলুস নিশ্চয়োজনীয়। একটা ধাক্কা দরকার। আজ বিপর্যয়ের ওপর দাঁড়িয়ে এই ধাক্কার অপরিহার্যতাকে আমরা অনুভব করতে বাধ্য হলাম। যুগে যুগে মানুষ ব্যাধি-সংক্রমণকে প্রত্যক্ষ

করেছে, প্রত্যক্ষ করেছে তার হস্তারক থাবায় শত শত মানুষ প্রাণ হারিয়েছে। আজ একুশ শতকে পৌঁছে প্রযুক্তি বিজ্ঞানের জয়জয়কার ধ্বনিত হলেও একথা মানতে হচ্ছে যে কোনো জীবাণুযুদ্ধের মোকাবিলায় মানুষ বড় অসহায়, কাতর। বিরাট বিশ্বের কথা বাদ দিয়ে শুধুমাত্র ভারতীয় উপমহাদেশের নাগরিক হিসাবে এই যুদ্ধে আমরা কী দেখলাম, কী পেলাম, কীভাবে তা আমাদের মনন-বিশ্বকে আলোড়িত করল বা আদৌ এর অমোঘতায় আমরা প্রভাবিত হলাম কিনা- এই জিজ্ঞাসাও আজ যথেষ্ট গুরুত্বপূর্ণ হয়ে উঠেছে।

২

‘এ শহর আতঙ্ক ছড়ায়
সারি সারি বাড়ি সব
মনে হয় কবরের মতো,
মৃত মানুষের স্তূপ বুকে নিয়ে পড়ে আছে
চুপ করে সভয়ে নির্জনে।’^(২)

কবি সুকান্ত ভট্টাচার্যের ‘সেপ্টেম্বর ৪৬’ কবিতার মগ্নতায় আশ্রয় নিয়ে আমরা যদি বর্তমান শতাব্দীর চরমতম সংকটের গভীরে প্রবেশ করি তাহলে দেখব রোগাক্রান্ত সময়-সমাজের সর্বব্যাপ্ত ভাঙনের কিনারায় দাঁড়িয়ে আজও বাংলা কবিতা গর্জে উঠতে সমর্থ। আর এ যুগের কবিরা সেই কালচিহ্ন ও কালাতিক্রমী লক্ষণকে ধারণ করে সমান প্রাসঙ্গিক, কাব্যদেহের সঙ্গে অন্যান্য, পরিপূরক। গণেশ বসু, কুমারেশ চক্রবর্তী, সৌমিত বসু, সুশীল মণ্ডল, সঞ্জয় মুখোপাধ্যায়, নৃপেন চক্রবর্তী, উদয়ন ভট্টাচার্য, রবীন বসু, জয়গোপাল মণ্ডল, অংশুমান কর, মন্দাক্রান্তা সেন, বিনায়ক বন্দ্যোপাধ্যায়, সুস্মেলী দত্ত, অরুণিমা চট্টোপাধ্যায় প্রমুখ কবির কবিতায় দেখি অন্তর্লীন এক বেদনাবোধ, এক তীব্র ক্ষোভের অপূর্ব শব্দভাস্কর্যের সহাবস্থান। মালার্মে বলেছেন, ক্রাইসিস কবিতার জনক। সময়ের এই সাপেক্ষ স্বভাবকে কবিরা শব্দের পর শব্দ সাজিয়ে নির্মাণ করলেন। ক্রাইসিসের তাড়নায় মৃত্যুত্যাগিত মানুষের অস্থিরতা, অনিশ্চয়তা, নৃশংসতা, যান্ত্রিকতা এবং সেইসঙ্গে উত্তরণমনস্কতার পরস্পর বিরোধী ভাবনাকে কবিরা নিজস্ব ভাষার বুনটে গাঁথলেন। অন্যান্য শতকের মতো এ শতকেও

আস্থাহীনতা, অসুস্থ পরিবেশ, বিকৃত মানুষের মন, রিক্ত-নিঃস্ব সামাজিক পরিসর সংক্রামিত করল বাংলা কবিতাকে। জীবাণুযুদ্ধের প্রেক্ষাপটে নির্মম দুরারোগ্য বাস্তবও কবিদের নিজস্ব উপলব্ধির জারকে পেলো আরোগ্যলাভের চাবিকাঠি। তাই তাঁদের কবিতাপাঠে মনে হয়েছে, এই কবিতাবিশ্ব যেন সংকট, সংক্ষোভ, বিপর্যয়, বিপন্নতা ও নিরাশা থেকে অনেক দূরে জেগে ওঠা জীবন-সংলগ্নতার নতুন বেলাতট, বহুমান সময়ের ছন্দে গ্রথিত এক নতুন পরিসর। কবির ভাষায় ‘পাখির নীলরঙা পালক নয়/ কবিতা এখন / বাঁকড়া গাছের ছায়ায় / এক ঢেলা গুড়, দুটো রুটি আর এক ঘটি জল’^(৩) - (কবিতা এখন : অংশুমান কর)

আণবিক ঘাতক করোনার পদবিক্ষেপে বদলে গেছে জীবনের রোজনাচা, বদলে গেছে কবিতার শব্দ-শরীর। আমাদের সত্তা জুড়ে শুধু ‘লকডাউন’ ও ‘কোয়ারেন্টিনের’ শব্দ আনাগোনা। কবিরাত্তো সময়ের উর্ধ্বে নন। জীবাণু-সংক্রমণের সূত্র ধরে তাঁদের কথাকায়ায় এই শব্দ-প্রসাধনেরও প্রলেপ পড়েছে। সংকটের প্রগাঢ় উপলব্ধিতেই তাঁরা কবিতাকে একইসঙ্গে যুদ্ধক্ষেত্র ও আয়ুধ করে তুলেছেন। তাঁদের ক্যাবায়ন যেমন চিত্রকরের তুলির মতো হৃদয়স্পর্শী তেমনি তীক্ষ্ণ ছুরির গভীর আঁচড়ও। এ সময়ের গুরুত্বপূর্ণ কবি সুশীল মণ্ডল ‘করোনা’ নামক কবিতাতে উদ্বেগ, অসহায়তা ও নৈরাশ্য থেকে জীবাণু-সংক্রমণ প্রভাবিত জীবনকে যেভাবে ফুটিয়ে তুলেছেন, তাতে তাঁর দহনক্লান্ত হৃদয় ও নিজস্ব দৃষ্টিকোণের অগ্রাধিকার স্পষ্ট হয়ে ওঠে। কবিতার দ্বিতীয় স্তবকের ‘সারাদিন উনুন ছড়ায় না আগুন/ সারাদিন ফুটপাতে অন্ধকার হাঁটে’ এবং তৃতীয় স্তবকের ‘গেরস্ত সারাদিন আছে ঝালে ঝালে’^(৪) পঙক্তিগুলিতে আমাদের সত্তার অনিবার্য সত্যের বৈপরীত্যকে শৈল্পিক মাত্রায় ব্যবহার করেছেন। আশির দশকের কবি কুমারেশ চক্রবর্তী কবিতাকে সাম্প্রতিক কালের সত্যে পৌঁছানোর জন্য বেছে নেন যুগপৎ জীবন ও জীবনরিক্ততাকে। সোহাগী চুম্বন বিষ হয়ে আজ শরীরে প্রবেশ করে। তিনি যখন লেখেন, ‘শুভদৃষ্টির প্রথম পলকেই সংক্রমণ ঢুকে আসে’^(৫), তখন এ বিষয় আমাদেরও, যার সঙ্গে মিশে যায় জীবন ও মরণের গহন উত্তাপ।

কবি বিনয় মজুমদার ‘ফিরে এসে, চাকা’র দ্বিতীয় কবিতায় লিখেছিলেন, ‘মানুষ নিকটে গেলে প্রকৃত সারস উড়ে যায়।’^(৬) বর্তমানের তাৎপর্যে এর গভীরতাকে আমরা অনুধাবন করতে পারি। এ যুগের অন্যতম প্রধান কবি অংশুমান কর এই গভীরতাকে বিস্তার দিতে লেখেন,

‘শত এবং সহস্র মৃত্যুর মাঝখানে শোনা যাচ্ছিল
পত্রমর্মরের মতো কিছু দীর্ঘশ্বাস।
সহস্র এবং লক্ষ মৃত্যুর মাঝখানে ছিল
একটি বিপন্ন সারসের উড়াল।’^(৭)
(জাদুবাস্তবতাহীন)

‘প্রকৃত সারস’ উড়ে যাওয়ার সঙ্গে ‘বিপন্ন সারসের উড়াল’ যেন সমান্তরালে নতুনভাবে উদ্ভাসিত হয়ে ওঠে। কবির আত্ম-উপলব্ধির নির্যাস থেকে বেরিয়ে আসে ‘কিন্তু এইবার উপমা আর কাজ করছে না।/ প্রতীক স্তব্ধ।’^(৮) নিরবচ্ছিন্ন পিড়ন, দহন ও হননে পরাভূত হতে হতে নিঙড়ে যায় মন, শরীর। তখন সাজানো-গোছানো রূপ আয়নায় আর ফুটে ওঠে না। মৃত্যু, হাহাকার, চোখের জল তখন অনিবার্য হয়ে ওঠে।

জীবাণুযুদ্ধে চূর্ণ হয়ে যাওয়া মানুষকে দেখান কবি তাজিমুর রহমান। কবিতার পঙক্তিগত ‘পরম একাগ্রতা নিয়ে / প্রথম, দ্বিতীয় ছাড়িয়ে তৃতীয় বিশ্বের দরজায় তার / আফ্রালন বর্জ্য রূপে পড়ার আগে/ চলো বিরহের ভাঁজে বেঁধে নিই ছইমাচার ঘর,’^(৯) কবি ভাষাকে ব্যবহার করলেন তীক্ষ্ণ ক্ষুরের মতো। প্রত্যেকটা শব্দ থেকে বেরিয়ে আসে নির্মম বাস্তবের অনুপুঞ্জ, বাস্তব সম্পৃক্ত রূপক।

এই সময়ের প্রত্যেক কবি প্রতীকীমাত্রায় মারণব্যাদির বীভৎসতাকে ও সেই সঙ্গে সমাজ-মানুষে এর গভীর সংক্রমণকে চিনিয়ে দিয়েছেন। কবি মলয় পাত্র ‘ছোঁয়াচ’ কবিতায় লেখেন, ‘চ্যাপলিনের সেই কোকেনের গুঁড়োর মতো / এ তো নাক মুখ কোথাও বাদ রাখে নি’।^(১০) কিংবা কুমারেশ চক্রবর্তীর লেখা ‘স্বপ্নও যদি ঘুমের মধ্যে সংক্রমণ লুকিয়ে ফেরে’^(১১) কিংবা কবি উদয়ন ভট্টাচার্যের ‘এক বিপন্ন গোষ্ঠী অন্য গোষ্ঠীর হাত স্পর্শ করতে ভয় পায়। / মুখোশে ঢাকা মুখ আবার

মুখোশ পরে^(১২)—পঙ্কজিগুলি পড়তে পড়তে টের পাই সংক্রামিত সময়ের প্রলম্বিত ছায়ায় বুকের রক্ত হিম হয়ে যাচ্ছে। প্রতিটি অঙ্গ আজ নরক-যন্ত্রণা অনুভব করছে। তারপর সবশুদ্ধ অন্ধকারের সিঁড়ি বেয়ে তলিয়ে যাচ্ছি মৃত্যুর গভীর অতল তলে।

কোনো সংশয় নেই যে, কবিতার বয়ানে মৃত্যু ও মৃত্যুজনিত রাজনীতি সম্পৃক্ত হয়ে রয়েছে। এখানে কবিদের নিজস্ব লিখন-পদ্ধতির ঔজ্জ্বল্য আমরা লক্ষ্য করি। মনে হয় যে করোনার আবহে শব্দের প্রচলিত পরিসরে মৃত্যু তার অদৃশ্য সুড়ঙ্গপথ তৈরি করে নিয়েছে। কবির মৃত্যুর জগতকে জীবনের অন্ধকারের সমান্তরালতায় নির্মাণ করেছেন। কবি প্রভাতকুমার মুখোপাধ্যায় প্রত্নতাত্ত্বিক ভাবনার মোড়কে মৃতজীবনের আলেখ্য রচনা করলেন, ‘প্রবল, প্রবলতর / অউহাস্য করোনা... টুকে রাখে, মৃত লাখখানেক কীভাবে দুমড়ে চুমড়ে / তালগোল পাকিয়ে পড়ে আছে গরবিনী সভ্যতার একশো’^(১৩) (মধ্যবিন্দু বলি যদি, কিংবা সন্ধিক্ষণ)। কবি স্নেহাংশু বিকাশ দাস একই যন্ত্রণায় লিখলেন, ‘তাহলে সবটাই যাওয়া আর যাওয়া... / সোজা ও সরল পাটিগণিতের পথ ধরে / হেঁটে চলেছে অসংখ্য উইপোকা, নবীন শাশানের দিকে’^(১৪) (কলরবহীন পথ)-র কথা। কবি সাহানারা খাতুনও অনুরূপ উপলব্ধিতে লিখেছেন,

‘প্রতি মুহূর্তে জীবনকে বাজি রেখে জীবনের গান গাইতে চেয়েছিল সে!

সাদা ধোঁয়ার কুণ্ডলী পাকিয়ে দূরের নীল আকাশে মিশে গেল একটা স্বপ্ন!

লাল লাল তারাদের ভীড়ে কোনো

একটা তারা যেন

বড় বেশি উজ্জ্বল!

১লা বৈশাখের লাল জামাটা এখনো ভাঁজ করা।

আজ ২রা বৈশাখ।’^(১৫)

-- দৃশ্যের পর দৃশ্যে মৃত্যুকে গাঁথলেন স্থপতির মতো। সময়ের রূঢ় বেদনা মৃত্যুরূপী যন্ত্রণাকেই তীব্র করে তুলল। ষাটের দশকের বরিষ্ঠ ও বলিষ্ঠ কবি গণেশ বসুর ভাষ্য অনুসরণে ‘ছুটে যাচ্ছে এ্যাম্বুলেন্স বিশ্বজুড়ে শোকার্ত কফিন / জীবন চিবোয়’^(১৬) তেও লক্ষ্য করি শরীরী মৃত্যুর থেকেও বড় হয়ে ওঠে আমাদের অস্তিত্বের মৃত্যু। কবি সুদীপ সরকার

এই মৃত্যুকে সত্য ও ছদ্ম সত্যের মাঝামাঝি রেখে প্রপঞ্চময় জগতের খোলসকে ছিঁড়তে চেয়েছেন, ‘দেখলাম, মরণোত্তর আয়োজন / সবার ক্ষেত্রেই প্রায় সম্মান। আতঙ্কিত আড়ম্বরহীনতা / শেষ বিদায়কে জনহীন নীরবতায় / মহান করে দিল। এই সঙ্কটকালে / বেঁচেবর্তে থাকা জীবিতদের চোখে দেখলাম সমগোত্রীয় চিত্রনাট্যের খসড়া। / সত্যি !! / মৃত্যুর সততাকে আন্দাজ করা / আমার পক্ষে অসম্ভব।’^(১৭) (নির্দায়)।

-- আতঙ্ক, অবসাদ ও মৃত্যু বর্তমান সমাজের গোত্রচিহ্ন। খুবই সংকেতপূর্ণ এই বাচন কবির। এই সূত্রে মনে পড়ে যায় জীবনানন্দের শ্লেষাক্ত বাচনঃ ‘নগরীর রাজপথে মোড়ে-মোড়ে চিহ্ন প’ড়ে আছে;/ একটি মৃতের দেহ অপরের শবকে জড়িয়ে/ তবুও আতঙ্কে হিম-হয়তো দ্বিতীয় কোনো মরণের কাছে’^(১৮) আজও প্রত্যেকের মুখের চেহারায়, চোখের ভাষায়, আতঙ্কের, মৃত্যুভয়ের মূলে রয়েছে সূক্ষ্মাতিসূক্ষ্ম জীবাণু হয়তো বা জীবাণুর অন্তরালে লুকিয়ে থাকা কোনো ছদ্মবেশী মানুষের মুখ।

৩

‘(আজ) চারিদিকে হতে ধনিক বণিক

শোষণকারীর জাত

(ও ভাই) জোঁকের মতন শুষছে রক্ত

কাড়ছে থালার ভাত’^(১৯)

-- ‘কৃষাণের গান’: কাজী নজরুল ইসলাম

একবিংশ শতাব্দীতে জীবাণুযুদ্ধের দহনবেলায় দাঁড়িয়ে মনে হয় আন্তর্জাতিক পুঁজিবাদের দম্ভ, পুঁজিবাদের সঙ্গে বিশ্বমৌলবাদের গোপন আঁতাত, প্রযুক্তির অভাবনীয় উন্নতিতে ভর করে সমাজতান্ত্রিক ব্যবস্থায় অভিঘাত, তৃতীয় বিশ্বের দেশগুলিতে সামাজিক ও রাজনৈতিক অস্থিরতার কাছে আমরা পর্যুদস্ত হচ্ছি, বিপন্ন হয়ে পড়ছি। রাষ্ট্র এখন মানবিক সত্তাকে বিক্রি করে দিয়েছে। বরং রাষ্ট্রের মধ্যে সংক্রামিত হয়েছে লোভ, ধূর্ততা ও নির্মমতা। অতিমারীকে আশ্রয় করে রাষ্ট্রের শাসকশক্তির রাজনৈতিক চাতুর্য, তাঁদের অসহিষ্ণু মনোভাব, উপলব্ধি ও উপলব্ধিহীনতা, ধর্মাত্মতা ও এক ভয়াবহ শূন্যতার সমান্তরাল উপস্থিতির দুর্লক্ষণ প্রকট হয়ে

উঠেছে। অনেক কবি কবিতার বয়ানে শাসকের অন্তঃসারশূন্যতাকে, তাঁদের কাপুরুষ ও অমানুষ হয়ে ওঠার ইতিবৃত্তকে এবং সেইসঙ্গে নিরন্ন, অসহায় মানুষের আর্তিকে নানা অনুপুঞ্জের মধ্যে দিয়ে আমাদের সামনে উপস্থাপিত করেছেন।

ষাটের দশকের ব্যতিক্রমী কবি গণেশ বসু অস্তিত্বের কোষে জমে থাকা অন্ধকারকে অন্তর্ভেদী দৃষ্টির আলোয় উদ্ভাসিত করেছেন। তিনি দেখিয়েছেন শোষণের মাত্রা সময়ের সঙ্গে সঙ্গে কীভাবে জটিল হয়ে উঠেছে। রাজনীতির দৃশ্য ও অদৃশ্য নিগড়ে সাধারণ মানুষ বন্দি হয়, পর্যুদস্ত হয় প্রতাপের অজস্র কৃৎকৌশলের কাছে। সাধারণ মানুষের এই জীবন-যন্ত্রণাকে নন্দনচিত্তার সূত্রে কবি সাজিয়ে দিয়েছেন। সেই সঙ্গে প্রশ্ন তুলেছেন, ‘মানবিকতাও অতিমানবিক হোক / মহানন্দার দাঁত কেন ব্ল্যাকডেথে? বৃষ্টিবাসনা। বুকের পাটাও চাই।/ মেহগনি স্থির আলোকের সংকেতে। / দায়িত্বহীন পার্থিবতার ভয়/ ছন্দ-নিধনে আমরণ পরাজয়’^(২০)। আজকের শোষিত মানুষ শোষকের হাতের ক্রীড়নক। অতিমারীর এই নেতিবাচক আবর্তন থেকে কবি লেখেন, ‘বাসনার অপমৃত্যু, অনুভূতি উস্কে দেয় দাঙ্গা মহাযুদ্ধের বিভ্রম’^(২১) (কোভিড-উনিশ)। ‘কোভিড-১৯ গল্প’ কবিতায় কবি শঙ্কর ঘোষ পরিস্থিতির উপস্থাপনায় এবং কথার বিন্যাসে গোপন শ্লেষে ঝলসে ওঠেন। ক্ষয়ক্লিষ্ট পরিসরকে বিশ্লেষণী ভাষ্যে নতুন রূপ দেন, ‘দিচ্ছি রাষ্ট্রের অপবাদ-রাজ্যের অপবাদ/ আইন অপবাদ, ঠিক মোকাম্মেলের / সেলাই মেশিনের মতোন/ ভাঙা দরমার ঘরে / বিদ্যুটে ভাবে...’^(২২) নৈসর্গিক সৌন্দর্যের বিবর্ণতায় তিনি যেন দেখতে পান, ‘স্নান চাঁদের আলোয় ...পাশাপাশি নদী আর চুল্লি / পোড়াচ্ছে তখন নাভিকুণ্ডলী / প্রাগৈতিহাসিক জরায়ু ভেঙে ...’^(২৩)

মানুষের ভয়ানক দুর্দিনে উদাসীনতা, সংকীর্ণতা, ঔদ্ধত্য, বিশ্বাসহীনতা, লোভ যখন অতিমারীর তাণ্ডবে উলঙ্গ কবি রবীন বসু কবিতার আখ্যানে খুঁজে নিয়েছেন বিশেষ শ্রেণির মানুষের চিহ্নায়ককে। তিনি দেখিয়েছেন আর্ত মানুষের পাশে দাঁড়ানোর সত্য ছবি আজ বিরল। বরং মানুষ আজ খুব জটিল, কঠিন। সে আজ নিষাদের ভূমিকায়,

‘উত্তাল উৎসব নেই বিমধরা ডিমেতালে বোল
কে যেন এসেছে দেখি চুপিসারে পালটিয়ে ভোল।...
ক্ষুধা তাই ভয় তাই চেপে ধরে সুমসৃণ গলা,
অন্ধকার ভারতবর্ষ দ্যাখে শুধু ধিকিধিকি জ্বলা’^(২৪)
(দারুণ-নিষাদ)

‘তির যেন লক্ষ্য স্থির টানটান দারুণ নিষাদ’^(২৫)
উপস্থাপনার রীতিতেই প্রচ্ছন্ন রয়েছে কবির যন্ত্রণা ও ঘৃণাভরা সমালোচনা। জনগণের সুখে-দুঃখে-সংশয়ে-উত্তরণে আজ যাদের পাশে থাকার কথা ছিল আজ তারাই রূপ বদলে তীক্ষ্ণ দৃষ্টি শকুনের মতো পরিবেশকে তছনছ করার সুযোগ সন্ধানে ব্যস্ত। তাই রাজনীতি যখন জৌলুস সর্বস্ব হয়ে যায়, তখন সেই রাজনৈতিক সমাজের ভেতরকার ছবি কবির হাত ধরে শব্দের দেহ থেকে বেরিয়ে আসে। কবি জয়গোপাল মণ্ডলের ‘তন্ত্র শেখো, মন্ত্র থেকে তন্ত্র’ কবিতাটি এই সত্যেরই প্রতিবেদন,

‘হে প্রিয়, তোমার খবর নেওয়ার দিন শেষ
গণতন্ত্রে ব্যক্তি-স্বাধীনতা যুদ্ধের সময়
স্বৈচ্ছাধীন নয়
আগুন জ্বালাবার অধিকার নির্বাচিতের,
মনোনীত তো হুঁটো জগন্নাথ ...’^(২৬)

জনগণের মনোনীত প্রার্থী শোচনীয় অধঃপতনের অন্ধকার সিঁড়ি দিয়ে নেমে গেছে ভগ্নমি ও লোভের অতলান্ত সাগরে। সরে গেছে আদর্শের মুখোশ। আত্মপ্রকাশ করেছে বীভৎস বাস্তবের নগ্ন রূপ। রাষ্ট্রীয় শক্তির জান্তব স্বভাবের কুশ্রীতাকে সময়ের ভাষ্য করে তোলেন কবি মন্দাক্রান্তা সেন। কবি অসামান্য প্রজ্ঞায় সুবিধাবাদের সুযোগসন্ধানী মানসিকতাকে মিলিয়ে দিয়েছেন অসহ্য গ্লানিকর বাস্তবের সঙ্গে। কবির কৃতিত্ব এই যে তিনি সহজ-সরল বাচনের অন্তরালে শ্লেষগর্ভ কথনের ইঙ্গিত সুস্পষ্ট করে তুলেছেন,

‘শাসক তুমি তো জনগণমনে নামো না
দ্যাখো হে সেখানে কত ভয় কত ক্রোধ
কিছুই বোঝো না, তুমি এত নির্বোধ!
তুমি তো শুধুই অমানবতার পূজারী
কী সে প্রার্থনা? এ দেশ হোক গে উজাড়ই?’^(২৭)
রাষ্ট্রযন্ত্রের ভড়ং, রাজনৈতিক সুবিধাবাদ সমাজের অন্দরে স্তরে স্তরে চক্রান্তের জাল বিছিয়ে

সাধারণ মানুষকে অন্ধকূপের দিকে ঠেলে দেয়। রাষ্ট্রের দুঃশাসনে মৃতের সংখ্যাও হারিয়ে যায় ভ্রষ্ট কালবেলার গম্বরে। কবি তাই প্রশ্নমুখর বাক্যবাণ ছুঁড়ে দিয়ে বলেন, ‘কত মৃত? বলো সত্যি সে সংখ্যাটি’^(২৮) কিংবা ‘পরিসংখ্যান রাজনীতি লুডো, নামে সাপ ওঠে মইয়ে,/ সেখানে সংখ্যা ওপরে উঠলে ভোটের সংখ্যা কমে’^(২৯) এক অণুজীবের ভয়াবহতা আমাদেরকে অনিকেত দিনযাপনের মুখোমুখি দাঁড় করিয়ে দিয়ে, চিরভ্যস্ত কাঠামোয় ঘুণ ধরা সত্তাকে হাজির করে ধ্বংসের সামনে। তাই কবির মনে হয়, ‘যাপনের চেয়ে শ্রেয় অকাল মরণ’^(৩০) তবু কি কবি এইভাবেই সন্তুষ্ট হবেন? কবি তাই অনিশ্চয়তাবোধে জীবনযাপন করতে করতে বলে ওঠেন, ‘দ্রোহীদের তরে আর নেই কোনো ক্ষমা’^(৩১)

রাষ্ট্র এখন আন্তর্জাতিক শক্তির দালাল। প্রযুক্তিকে ব্যবহার করে মানুষকে ঠেলে দেয় ধর্মান্ধতার নিকষ কালো অন্ধকারে। যেখানে ‘শেষ হয় না ধর্মের পোশাক ধরে টানাটানি’^(৩২) এই যে সাংস্কৃতিক-অপচয়, অবৈজ্ঞানিক শূন্য ফানুস একেই হাতিয়ার করে সমাজ-পরিস্থিতির উপস্থাপনা পাঠকের কাছে প্রতিরোধে উৎসুক এক জাগ্রত সত্তার বার্তা হয়ে ওঠে।

শাসক শক্তির আগ্রাসনের সঙ্গে সঙ্গে সমাজদেহে জ্বলন্ত হয়ে ওঠে ক্ষুধা, অনাহার ও তজ্জনিত মৃত্যুর মতো সমস্যাগুলি। কবি অরবিন্দ বন্দ্যোপাধ্যায় ‘কোয়ারেন্টিন’ কবিতায় নিরন্ন, হাভাতে মানুষের অসহায়তাকে চিহ্নিত করতে শাসক শ্রেণির অমানবিকতাকে স্পষ্ট করেছেন,

‘ফুলে ফেঁপে উঠে ব্ল্যাকমার্কেট
প্রশাসন দেখে শুনে অন্ধ
অভুক্ত গরিবের খালি পেট
শোঁকে শুধু সরকারি গন্ধ’’^(৩৩)

মৃত্যুশাসিত পথে জড়ো হয় অসংখ্য বুভুক্ষু মানুষ। অনাহারে দিন যাপন করে, সর্বস্বান্ত হয়ে মৃত্যুকে বেছে নেয় জীবনের মূলমন্ত্র রূপে। ব্যঙ্গের নিষ্ঠুর ভাবনায়, বুদ্ধিদীপ্ত শাণিত প্রত্যয়ে কবি সুলেখা সরকার লেখেন, ‘মৃত্যু আর গণকবরের পাশে পঙ্গু সড়ক / লকডাউন। আজ রোজগারহীন কোটি হাত/ কয়েকশো কিমি রাস্তা পার করে অনাহারী জাত /

চলছে চলছে জীবনের দিকে ...’^(৩৪) অসহায় আমরা, ক্লান্ত, ক্লান্ত, ক্লান্ত ...। ক্ষুধা, অনাহার যখন একমাত্র প্রাসঙ্গিক তথ্য হয়ে ওঠে তখন দেখি সেখানেও মৃত্যু ফাঁদ পেতে অপেক্ষায় থাকে। শান্তনু চক্রবর্তী দুই হকারের কথোপকথনে সেই অযাচিত মৃত্যুর কথা বলেছেন যা ভঙ্গুর অস্তিত্বের দর্পণে প্রতিবিম্বিত হয়ে ওঠে, ‘...তপন তখন কড়িকাঠে করে খোঁজ / তিনখানা দড়ি পারবে তো নিতে চিন্তাটা সেই নিয়ে!’^(৩৫) নিষ্ঠুরতায় রুক্ষ আমাদের অস্তিত্ব মুহূর্তেই দুমড়ে মুচড়ে ওঠে।

8

‘ওরা চিরকাল
টানে দাঁড়, ধরে থাকে হাল;
ওরা মাঠে মাঠে
বীজ বোনে, পাকা ধান কাটে।
ওরা কাজ করে
নগরে প্রান্তরে’^(৩৬)

–‘ওরা কাজ করে’: রবীন্দ্রনাথ ঠাকুর

জীবাণুযুদ্ধের ধূসর পরিমণ্ডলের অনুযুগ থেকে আমরা এমন এক সামাজিক প্রত্যাঘাতের মুখোমুখি হয়েছি যেখান থেকে আমরা গভীর উত্তপ্ত আশ্লেষে নিজেদেরকে বিদ্ধ করি, যন্ত্রণায় দগ্ধ হই। ইতিহাসের ঘূর্ণাবর্তে খেটে-খাওয়া মানুষেরা বারবার খড়কুটোর মত ভেসে যায়, উৎপাটিত হয় নিজস্ব সংস্কার-বিশ্বাস ও স্থিতিশীলতা থেকে। বৈশ্বিক আবহে চরম বিনিপাতের পর্বে মানুষের শরীরে যখন সুস্মৃতিসুস্ম জীবাণুর প্রচণ্ডতা সর্বব্যাপ্ত তখন আমাদের রিক্ততা ও আত্ম-প্রতারণার মুখোশ যেন স্থলিত হয়ে পড়ে। মানুষ আজ মনুষ্যেতর। যুক্তিহীন প্রশ্রয়ের দীর্ঘমেয়াদী অন্ধতায় লক্ষ লক্ষ মানুষকে ‘পরিযায়ী শ্রমিক’ করার উৎকট উদ্যোগ যে আমাদের অন্তঃসারশূন্যতাকে তর্জনী-সংকেত করে তা আমরা অনুমান করতে পারি। যে দেশে তিন-চতুর্থাংশ মানুষ দারিদ্র্যসীমার নিচে বাস করে সেখানে সব পেয়েছির দেশে অলীক কল্পনায় বঁদু হয়ে থাকা সমাজ-সভ্যতার দুর্ভেদ্য অন্ধকারকে আরও দুরতিগম্য করে দিল এই মহারণের অংশীদার পরিযায়ী শ্রমিকেরা। খেয়ে-পরে ভালো থাকার আশায়

কিংবা ছোটো ছোটো সুখকে মূল্য দিতেই তো তারা 'মানুষের নিত্য প্রয়োজনে জীবন মরণে' উৎখাত হয় আজন্ম বিশ্বাস থেকে। এদের তো কোনো স্বপ্ন নেই, নেই ভালোবাসাও। আদিম যাযাবরের মতো এরা স্রোতের শ্যাওলা হয়ে কাজের সন্ধানে ভেসে বেড়ায় দেশে কিংবা দেশের বাইরে এক প্রান্ত থেকে অন্য প্রান্তে। সুতরাং এই লক্ষ লক্ষ ক্ষুধার্ত মানুষের মৃত্যুমুখী মিছিল কি আমাদেরকে ভাবায়? নাকি তাদের জান্তব আত্ননাদ শুধুই শূন্যে বিলীন হয়ে যায়? অনন্ত এই জিজ্ঞাসার সূত্র ধরে মনে পড়ে পূর্বাঙ্গ লেখক জোসে সারামাগোর 'Blindness' উপন্যাসের প্রসঙ্গ, যেখানে ঔপন্যাসিক স্পষ্ট করে দেন আমাদের সঠিক অবস্থানকে, 'I think we are blind, blind but seeing, blind people who can see but do not see.'^(৩৭) মনুষ্যত্বের বোধ থেকে যারা ভ্রষ্ট তারা তো প্রকৃতপক্ষে অন্ধই। মনস্তত্ত্ব, মহামারী প্রমাণ করেছিল, সভ্যতার সহযাত্রী নৃশংসতা, অসাড়তা ও পাশবিকতা। এই শতকের জীবাণুযুদ্ধ আরো একবার প্রমাণ করে দিল সভ্যতার একমাত্র সহচরী বিশ্বাসঘাতকতা, বর্বরতা, নির্মমতা ও নিস্তারহারা উষরতা।

বুভুক্ষু মানুষের দল জানে তাদের জন্য সাজানো নেই কোনো রাঙামাটির পথ। বরং যে উদ্বেগে, ঘরে ফেরার তাড়নায় রুক্ষ পথকে বেছে নিয়েছিল আজ তারা মনে মনে টের পায়, সমস্ত পথের প্রান্তে কিংবা পথের ধারে ওৎ পেতে বসে আছে মৃত্যু। তারা জানে ক্ষুধাসর্বস্ব দেহ ও মনের কথা, অনুভবও করে ক্ষুধার ক্লান্তি বিবশ করে চেতনাকে। তাই রাতের নিস্তন্ধতায়, অন্ধকারে যেখানে শরীর পৌঁছায় না শরীরের কাছে তাকেই বেছে নেয় এই অভুক্তরা। একদল কাজহারা মেয়ে-পুরুষ জড়ো সড়ো হয়ে শুয়ে থাকে নিশ্চলভাবে। কারো চোখ ভরে উঠেছে গভীর ঘুমে, কারো চোখ ক্লান্তিতে অর্ধবোজা, আবার কারো চোখে হানা দেয় মৃত্যুর ইশারা, আবার কারো চোখ নতুন দিনের স্বপ্ন বোনে। এরা তো ক্ষুৎপিড়িত জীবন থেকে মুক্তি পেতে দুরাশায় পা দিয়েছিল পথে। কেই বা জানত রাতের অন্ধকার ও মৃত্যুর নিকরুণ অন্ধকার একাকার হয়ে যাবে। অনুভবের এই গ্রন্থনা থেকে কবি দেবেশ ঠাকুরের 'রেল লাইনে ষোড়শ লাশ' কবিতার বয়ানে জমাট

বাঁধে ব্যর্থ আত্ননাদের বিপ্রতীপে প্রহসনের নিষ্পন্দ কালশিটে,

‘শ্রমিক হাঁটে উলুবেরিয়ায়, সুরাতে ইন্দোরে
গায়ে ছেঁটাও রাসায়নিক শুদ্ধ করো বিষে
ক্ষুধাদীর্ণ ষোড়শ পদের রুটি ধুলোয় পড়ে
রেশন না থাক বরাদ্দ হোক এক এক গরম শিসে।’^(৩৮)

-- সার্থক এই বার্তার সঙ্গে সঞ্চরিত হয় ট্রাজিক শ্লেষও। মৃত্যুর গহন প্রতীকতায় এদের যাত্রা। যে মেয়েটি হাঁটতে হাঁটতে ফিরে গেছে অনেক আগেই মৃত্যুর কাছে তার কথাও কবি বিজয় সিংহ শ্লেষ ও বিবিভক্ততার আঁচড়ে স্পষ্ট করেন, ‘...নদী/ বুক উপড়ে হাহাকার করে মুখে কালো রক্ত, ঠোঁটে / বিষ, বিষ থেকে প্রেম, প্রেম থেকে রক্তমুখী গোটা / ছড়িয়েছে পাখি-দেহে, পাখি থেকে অন্ধে বধিরেও / বধির গুলোরা, পথ যম নির্দিষ্ট ও চিহ্নহীন / ও বাউলিয়া ও পেগান’ ...^(৩৯) (বোন)। অসামান্য শাব্দিক উপস্থাপনার সূত্রে মৃত্যুর ভয়াবহ বাস্তব উপস্থিতি আমরা যেন শিকড়ের গভীরে অনুভব করি।

অসম অর্থনৈতিক বিকাশের অনিবার্য ফলশ্রুতি হিসেবে ‘ছায়াসুনিবিড় শান্তির নীড়ে’ ঘিরে থাকা প্রকৃত বাস্তব এখন যবনিকার অন্তরালে। পুঁজিবাদী শক্তির সঙ্গে মৈত্রী স্থাপন করে জীবনকে সবদিক থেকে উপভোগ করার চোখধাঁধানো মনমজানো সুপরিকল্পনায় মানুষের অবয়ব, যা ছিল অস্পষ্ট, জীবাণুযুদ্ধের মধ্যে দিয়ে এগোতে এগোতে সেই অস্পষ্ট দেহের বহিঃপ্রকাশ ঘটে কঙ্কালসাররূপে।

কবি তাপস রায়ের কবিতার অন্তিম পংক্তিগুলি ‘পরিয়াদী পাখিটির মতো সেই যুবক ছেলেটিকে দেখি / বছর বছর আসে, / মাঝ রাত্রে চাঁদ ভাঙে, আর ভোরের হাওয়ায়/সে ডানা মেলে উড়ে যায় কী জানি কোথায়’^(৪০) -- পাঠ করে মনে হয় জীবন এখন স্বপ্নচ্ছায়ায় রাজপথ নয়, বরং রোদনভরা বসন্তের গলিপথ।

কবি মঞ্জুশ্রী সরকার ‘অভিবাসন’ কবিতায় লিখেছেন, ‘ওরা দেখেছে শহরের নাম রূপ / ধনতন্ত্রের অন্তহীন ভয়াবহতা / ৭৩ ভাগ সম্পদ গচ্ছিত / এক শতাংশ মানুষের হাতে ! / আর বাকি ২৭ ভাগ ! / সেখানেও যোচ্চুরি।’^(৪১) শাস্তনু চক্রবর্তীও রাষ্ট্রের মূল্যবোধহীনতাকে চোখে আঙুল

দিয়ে দেখান, 'রাষ্ট্র এদের পরিযায়ী নামেই না কি ডাকে / কোথায় থাকে, কোন দিকে যায় কেই বা খবর রাখে' (৪২) (পরিযায়ী)। 'তবু তো মানুষ নির্বিকার, উদাসীন'। কবি সুস্মেলী দত্ত এই দুঃসহ দিনের ছবি আঁকেন শব্দখচিত পাতায় 'কাল কেটে যায় জটলা শ্রমিকে ছাঁটাই স্বভাব / ভাবনা আদরে খিল তুলি আজ যে যার ঘরে / কলম কালিতে অভ্যেস মতো শব্দবন্ধ / বুনে যাই একা অসহায়তার স্বার্থ-সমরে।' (৪৩)

কবি সঞ্জয় মুখার্জীও সময়ের ঔদাসীন্যকে, নিষ্ঠুর নিষ্প্রাণ নগরবাসীর বোধহীনতাকে প্রতীকী বিন্যাসে 'মাতৃদিবসে' নির্মাণ করলেন। তাঁর উপলব্ধি থেকে জাত একেকটি শব্দ যেন জ্বলন্ত গোলার মতো আছড়ে পড়ে আমাদের বোধিতে। তিনি যখন লেখেন, 'শুনেছি আজকে মাতৃদিবস / আমরা কুসন্তান / দুঃশাসনের সোনার থালায় / তুলছে হিসেবী তান। / তোমাকে বাঁচাতে এই দুই হাতে / ধরেছি হাতুড়ি শব্দ / মাঠেতে মিলেতে ডকেতে খনিতে তুলেছি মুখের রক্ত' (৪৪) তখন বুঝতে পারি তাঁর বিবরণে শ্লেষ ও ধিক্কার গোপন থাকে না।

...শহর ও শহরতলির বহুধাবিভক্ত সমাজে বাস্তবতার ধরন পৃথক, পৃথক বেঁচে থাকার মৌলিক চাহিদাগুলিও। তাই একদিকে পরিশীলিত মহানাগরিক সমাজের ভোগবাদ অন্যদিকে খেটে-খাওয়া, অন্তর্বাসী মানুষের ক্ষয়ক্লিষ্ট পঙ্গুত্বকে কবি স্বপন ভট্টাচার্য বিষয়বস্তু ও প্রকরণের সুষম সমন্বয়ের মধ্যে দিয়ে উপস্থাপন করেছেন-

'তোরা মুখে মুখোশ পরে / মাংসে, মাছে, পদ্যে /
আমরা ছিলাম শহরতলীর / ভূমিকাহীন গদ্যে /
তোদের ফেরা এমন কেন / হাত মেলালেই মৃত্যু?
.... তোদের সফর আমার তো নয় / রুটি
আমার চাই / গ্রামের দিকে হাঁটছে জীবন /
- গ্রামেই ফিরে যাই।' (ফেরা) (৪৫)

সংকটের বলয় থেকে মনে হয় জীবাণুর দংশনে নীল হয়ে যাওয়া মননে মৃত্যু কি আদৌ দাগ কাটে? দৈনন্দিন জীবন-যাপনের স্রোতে ভেসে আসা দুর্ঘটনা যেন বুদবুদের মতোই। তাই নিধনযজ্ঞের পরেও মনে মনে একটা চাপা বিদ্রোহ কিংবা আত্মশ্লাঘা আমরা অনুভব করতে পারলাম না।

কবি অরুণিমা লিখছেন,

'মহারাষ্ট্র মধ্যপ্রদেশ গুজরাট দিল্লি তেলেঙ্গানা
তেলেঙ্গানা দিল্লি গুজরাট মধ্যপ্রদেশ মহারাষ্ট্র
ফুলদানির জলটা বদলে দিতে হবে...' (৪৬)

আমাদের চৈতন্যে আজ মড়ক লেগেছে। কবি অংশুমান কর দেখিয়েছেন জীবাণুযুদ্ধের প্রেক্ষাপটে আমাদের আত্মিক-বক্ষাত্মকে। বয়ানের অন্তর্ভূত বিদ্রূপে ঝলসে যাচ্ছে আমাদের অস্তিত্ব,

'কেন হাঁটছিল? কেন হাঁটছিল?
কত বাস ছিল, কত ট্রেন ছিল
তবু হাঁটছিল? তবু হাঁটছিল?
তার চে' বড় কথা হল ওরা
কেন দাঁড়ায়নি 'মান্য' লাইনে
যে লাইন দেবে সামনের মাসে
আমার মাইনে?' (লাইন) (৪৭)

চক্ষুলজ্জাও উড়ে গেছে আমাদের। কবি শ্রীজাতও লেখেন 'রুটির বিভেদরেখা, / ঘুমন্তের মাথায় ও ধড়ে / আমি ঠিকই বেঁচে থাকি। / আমার বিবেক কাটা পড়ে।' (৪৮) -প্রত্যেকটি পঙক্তি যেন অন্তর্গূঢ় বিদ্রূপেরি ধ্রুবপদ।

মনে পড়ে যায় সৈয়দওয়ালীউল্লাহের 'নয়নচারী' গল্পের আমুর কথা। আমুও স্বপ্ন দেখেছিল ঢালা মাঠ, ঘাস শস্য ও নদী ময়ূরাক্ষীর। অথচ আমুর মতো আজ শতশত প্রাণ কীটপতঙ্গের মতো অন্ধকারের বিপুলতায় মিলিয়ে গেল। প্রমাণ করে দিয়ে গেল ক্ষয়ের সংক্রমণের জন্য কোনো জীবনদায়ী প্রতিষেধক নেই। তবুও মৃত্যুকে পেরিয়ে ছিন্নমূল মানুষের দল বর্তমানে বাঁচে, হয়তো বা আবার বেঁচে উঠবে অদূর ভবিষ্যতের ভাসমান দীপে বিলীয়মান জলবিশ্বের মতোই আর আমরা তখন 'হৃদয়ের অবিরল অন্ধকারের ভিতর সূর্যকে ডুবিয়ে ফেলে' (৪৯) অমরত্বের নতুন চিত্রনাট্যের অপেক্ষায় থাকব।

৫

'তোমার যজ্ঞাণা মুছে নেবো;
তার বদলে, ঈশ্বর, তার বদলে আসুক
তোমার কাজক্ষিত আরোগ্য।' (৫০)

- 'আরোগ্য': নবনীতা দেবসেন

ভূগোল - অর্থনীতি - ইতিহাস - সমাজবিন্যাস ও সময়পটের সোপানমালায় সংকটের পর সংকট সাজিয়ে আজ আমরা পৌঁছেছি জীবাণুসন্ত্রাসের স্নায়ুকেন্দ্রে। এক জীবাণুর ধাক্কায় অসংখ্য মানুষ গৃহবন্দি। অনিশ্চয়তা ও আশঙ্কায় এদের দিনযাপন। আরো মানুষ অনাহারে অর্ধদগ্ধ হয়ে ফিরতে চাইছে মানসিক বিশ্রামের পথে। আজ সময়টাকে অনেক বেশি অসহনীয় মনে হচ্ছে। হয়তো বা প্রতিদিন মৃত্যু আর সংক্রমণের সংবাদ দেখতে দেখতে নিস্পৃহ হয়ে উঠছি। এখন বিষাদানুভব কিংবা মৃত্যুযন্ত্রণা যেন জীবনের এক অনভিপ্রেত আশ্চর্য খেলা। যে খেলায় বিজয়ের গর্ব নেই, নেই পরাজয়ের গ্লানি। এভাবে চলবে ক'দিন? এর থেকে উত্তরণের কি কোনো পথ নেই? ভয়াবহতার মধ্যে থাকতে থাকতে একবারও কি আমরা বলতে পারিনা 'আমি ভয় করব না ভয় করব না। / দুবেলা মরার আগে মরব না'?...^(৫১)

বর্তমান শতকের বহু কবি বিলয়ের মধ্যেও আকাঙ্ক্ষা করেছেন সেই কাক্ষিত দিনের যেখানে মানুষ খুঁজে পাবে উত্তরণের ঠিকানা। ঈশ্বরের প্রসাদহীন মানুষের মানবিক চৈতন্য উদ্বোধিত হোক -- এরই ছায়াপাত কবিদের কাব্যবিশ্বে। ফলত সংক্রামিত মানুষের পৃথিবী অতিমারীর বিচিত্র বিভঙ্গে উত্তাল সময়ের মোহনাতে দাঁড়িয়ে দেখতে পেল উত্তরায়ণ মনস্কতার অভিব্যক্তি। কবি অংশুমান কর যখন লেখেন 'এইরকম একটা পৃথিবীর কথা / আপনি কি কল্পনা করতে পেরেছিলেন মার্কস?/ এই দেখুন গান গাইছেন জন লেনন / গান বাঁধছেন সলিল চৌধুরীঃ 'ঢেউ উঠছে, কারা টুটছে / আগামী দিন মুক্তির'^(৫২) তখন নিবিষ্ট চিত্তে অনুভব করি কবিতার বক্ষে লগ্ন হয়ে থাকা 'মুক্তি' শব্দটি পুরোপুরি বিনির্মিত হয়ে গেল। 'মুক্তি'র গভীর ও স্থায়ী প্রভাবের অনুরণনে ছুঁয়ে থাকে আগামীর স্বপ্ন। 'স্পর্শ' কবিতাতেও দেখি ক্ষমাপ্রার্থীর স্বীকারোক্তি এক মুক্তিকামী দার্শনিক চেতনা নিয়ে প্রকাশিত হয় প্রকৃতির আবাহন গীতিতে,

'হে ধরিদ্রী, হে বসুধা, তুমি আমাদের ক্ষমা করো।

.....
এই হাতে আমরা আর কোনও দিন পাপ করব না।
শুধু তুমি আমাদের ফিরিয়ে দাও' ...^(৫৩)

লালিত প্রত্যয়ে সময়কে বিদ্ধ করে বলেন, 'ও আগামী পৃথিবী, তুমি কেন হবে না / চাঁদের ও পিঠের মতো উজ্জ্বল, মায়াময়'^(৫৪) - নৈসর্গিক সৌন্দর্যে অবগাহন করে জীবনের আগামী প্রাত্যহিকতাকে নির্মাণ করেন তিনি, যা আমাদেরকে আবিষ্ট করে।

অনুভূতি প্রকাশের সততা ও সাহসের সাক্ষর বহনকারী '২২শে মার্চ, ২০২০' কবিতায় কবি কুমারেশ চক্রবর্তী অনবদ্য সংকেতপূর্ণ ভাষায় প্রকাশ করেছেন জীবনকে-

'যদি পরিশ্রুত হতে পারি কিছুদিনের মধ্যেই...
কাঁসর ঘন্টা বাজিয়ে সেখান থেকেই
নতুন সমুদ্রের গায়ে.... 'ভালবাসি',
লিখে জানাব একে অন্যকেই'^(৫৫)

প্রতিটি শব্দ যেন বিধ্বস্ত বিশ্বাসের মধ্যে ফিরে পাওয়া আশ্বাস, চেতনার পঙ্গুত্ব থেকে ফিরে পাওয়া পরিত্রাণের পথ। 'ভুল ভেঙে ভালবাসাও ফিরে এসে শিগগিরি' কিংবা 'স্কুল গেটে দাঁড়াবে হেসে লাল গোলাপের...। শুভেচ্ছা জানাতেই'^(৫৬) পঙক্তিগুলি যেন নিয়তিকে স্বীকার করেও এক অদম্য ভালোবাসার আলো, হৃদয় জুড়ে ফুটেবে বলেই দীর্ঘ অপেক্ষার মুকুল হয়ে থাকে।

'তবুও মানুষ বাঁচে এইসব মহামারী নিয়ে,/ মধ্যরাতে জ্যোৎস্না আঁকে বুকে'^(৫৭) কবি নৃপেন চক্রবর্তীর লেখা 'তবুও' কবিতার পঙক্তিগুলি জীবনের জয়ধ্বনি, কাব্যিক উদ্ভাসে ভেসে ওঠা সংবেদী ভাবনা। 'ছুঁয়োনা' কবিতায় দেখি, গ্রস্ত কাল যখন ঘরের সীমানায়, সেই দুর্দিনেও কবি আশ্বাস দেন, নিশ্চিত নির্ভর আগামীর,

'অস্থিণী কুমারেরা যুদ্ধ শেষে ফিরে এলে
আমরা আবার ফের কাছাকাছি হবো,
কাছাকাছি- নক্ষত্রের তলে।'

ভালোবাসার শিঞ্জে মুখরিত হয়ে ওঠে কবিতার শব্দগুলি।

নির্মল সামন্ত আর একজন কবি, তিনি নিসর্গ সৌন্দর্যের আনন্দানুভূতিকে মিলিয়ে দিয়েছেন নতুন জাগরণের দ্যোতনায়। তাঁর কবিতার মধ্যে কোনো নৈরাশ্যের বেদনা নেই, আদ্যন্ত নতুন বোধে

দীক্ষিত হওয়ার কথা ধ্বনিত। সময়ের সাক্ষরকে ধারণ করে সময়ের অভিঘাত অনুভূত হয় কবিতার শরীরে। তিনি নিজের বিশ্বাসকে প্রোথিত করে মানুষকে আত্মবিশ্বাসী করতে চান। বিশ্বাস ও বোধের অদ্বৈতটানে তিনি শোনের দায়িত্বের কথা, ‘আমরা পারবো -- / কারণ মানুষই শেষ কথা বলে, আমরা পারবো, কারণ মানুষ জানে, মানুষই ওড়ায় বিজয়পতাকা।’^(৫৯)

কবি সৌমিত বসু ভাবনার বিচিত্র বাতায়নে মুক্ত করে দিলেন, রোগাক্রান্ত পৃথিবীর সুস্থ হয়ে ওঠার শতসহস্র বর্ণার ধ্বনি, ‘নিঃস্ব দিন ফুটে ফের উল্লাসে / আকাশ মাটি মুক্ত হবে ভাইরাসে।’^(৬০) কবি দেবারতি ভট্টাচার্য ‘লড়াই’ কবিতায় আশ্রান করলেন সেই লড়াইকে যা ‘প্রতিঘাতের লড়াই / লড়াই টিকিয়ে রাখার লড়াই / হাওয়া আর রোদ্রের লড়াই’।^(৬১) আমাদের আত্মদ্রোহের মধ্যেও উঁকি দিয়ে যায় একটুকরো জীবন, সেই জীবনকে ছুঁতে অসুস্থ পরিবেশকে কবি মধুশ্রী সেন সান্যাল ট্রাজিক সংরাগে রক্তিম করেন, ‘আগে ছুটে যেত শাল মহয়ার বন আর / অস্থির জলের কাছে, / সেসব জঙ্গলে ফোটে এখন পলাশ... কাটিয়ে আতঙ্ক-ব্রাস, লকডাউন দ্যাখে / দূরে লাল বসন্ত এসেছে...’^(৬২) কিংবা খোঁজ দেন সেই বিশল্যকরণীর যার স্পর্শে ‘আঁকবে আলো দিকে দিকে সুস্থ-রোদের খনি...’^(৬৩)।

কবি মন্দাক্রান্ত সেন রোগগ্রস্ত পৃথিবীর দিন যাপনের বিভিন্ন অপূর্ণতার কথা স্পষ্ট করে বলতে ভালোবাসেন। উপলব্ধির বিশুদ্ধতায় পাঠকও দূলে ওঠেন তাঁর সরব কণ্ঠস্বরে। ‘বিপন্ন কবিতা’, ‘রাষ্ট্র আজকে অন্ধ’, ‘আঁধার স্বদেশ’-- এমনই নানা কবিতায় দৃশ্যপ্রপঞ্চময় সমাজে মানুষের আশু প্রয়োজনীয় উত্তরণকে জোরালোভাবে চিহ্নিত করেছেন, ‘মানুষ বাঁচুক, মৃত্যুমিছিল / থামুক রোগে বা ক্ষুধাতে,’^(৬৪) কিংবা ‘তোমার আমার বোধোদয় হোক খাঁটি / না, মৃত্যু নয়। জীবন মিছিলে হাঁটি’^(৬৫)-প্রত্যেকটি পঙক্তি শ্লোগানের মতো আমাদের শরীর ও মনকে উদ্দীপ্ত করে, আন্দোলিত করে।

কবি তাজিমুর রহমান নিসর্গচেতনাকে অনুষঙ্গ করে জীবাণু ও সভ্যতার পারস্পরিক হনন পর্বের ইতিকথা রচনা করেন। সেই সঙ্গে নিরাময় পৃথিবীর

ভাবীকথনকে চিনিয়ে দেন এইভাবে, ‘অনপনেয় দুঃখগুলো দরজায় কড়া নাড়লো/ জাস্টিন ট্রুডোর চোখের জলে চিনে নিতে হয়ে দেশ’।^(৬৬) কবি বিনায়ক বন্দ্যোপাধ্যায়ের কবিতার পঙক্তিগুলি ভবিষ্যজীবনকে নিশ্চিত করার কথা বললেও শ্লেষময় বাচনে আমাদেরকে উদ্দীপিত করে, অজানা আশঙ্কায় কেঁপে ওঠে বুক,

‘তবু নিশ্বাসে যা হারিয়েছে
সবটুকু
নাগালেই পাবে...
গলা কি শুকিয়ে আসছে?
এনে দেব,
একটু জল খাবে?’^(৬৭)

(হয়তো এই দিনও কেটে যাবে)

কবি মঞ্জুশ্রী সরকারে অপ্রতিরোধ্য আশাবাদে মিশে থাকে সংশয় ও অপেক্ষার নিঃশ্বাস। ‘অপেক্ষা’ কবিতাটি তাই দুস্থিত সময়ে কবির একান্ত আত্ম-অভিলাষ,

‘অনিমেঘ তুমি ভালো আছো তো!
আজ চারদিন হলো তুমি কোয়েরেন্টিনে
কোনো খবর পাইনি আমি
ফিরবে তো সুস্থ হয়ে !!!
অপেক্ষায় থাকে মন।’^(৬৮)

প্রত্যেক কবির কবিতা রোগদগ্ধ মানুষের পৃথিবীর কাছে আগামীর ইস্তাহার। বাস্তব যখন রিভ, নিঃস্ব, কবিতার মধ্যেই পাই সম্ভাব্য মুক্তির দিশা,

‘তরুণ কবির কাঁধে ভর দিয়ে হেঁটে যাচ্ছে সময়
মাস্ক পরিহিত হ্যান্ড স্যানিটাইজার নিয়ে
কবিতা এখন সংক্রমণ মুক্ত হবে...
কেননা, সভ্যতা তার ঘাড়ে পা রেখে
অনন্ত যাত্রায়...’^(৬৯)

(কবিতার অনন্ত যাত্রা : রবীন বসু)

আমরা অনুভব করি আতঙ্কের ও মৃত্যুর বধ্যভূমি আবারও বদলে যাবে চরণভূমিতে, দীর্ঘ অপেক্ষার পর সময় ছুঁইয়ে দেবে প্রাণের দেবতার চরণ স্পর্শ।

৬

অতিমারীর পরিচিত ইতিহাস অনুধাবনে একথা স্পষ্ট হয়, জীবাণুযুদ্ধের প্রেক্ষাপট সমগ্র সাহিত্যের অন্তর্বস্তু ও প্রকরণ ভাবনায় শুধু নান্দনিক পরীক্ষার অধ্যায় রচনা করেনি, বরং দেশ-কাল-পাত্রের অন্ধকার দিকগুলি সম্পর্কেও প্রতিবাদের পসরা সাজিয়েছে। বাংলা সাহিত্য-ভুবনও এর ব্যতিক্রম নয়। বর্তমান শতকেও বাংলা সাহিত্য-সংস্কৃতির ভাবুক ও স্রষ্টারা সময়ের আবহে নবাগত জীবনেও জীবাণুর সাড়ম্বর উপস্থিতি ও তার প্রভাব সম্পর্কে নিজেদের জিজ্ঞাসা ও উপলব্ধিকে গল্পে-কবিতায় - প্যারোডিতে - রঙ্গ-রসিকতায় স্তরে স্তরে সাজিয়ে দিয়েছেন। তাঁদের বয়ানে, উপস্থাপনের শৈলীতে কখনও প্রত্যক্ষতার সঙ্গে আবার কখনো অর্ধস্ফূটভাবে, ইশারায় করোনা নামক জীবাণুযুদ্ধের আসন্নকালের সম্ভাবনা ও আশঙ্কাকে মিলিয়ে দেখাতে চেয়েছেন, দেখাতে চেয়েছেন কীভাবে সমকালীন অনুভবের সঙ্গে বিগতকালের অভিজ্ঞতা মিশে গেছে বাঙালির ক্রমজায়মান সাহিত্যিক অভিব্যক্তির ছায়াধূলে। সাম্প্রতিক কবিতাপাঠ ও তার বিশ্লেষণে সেইসব উপলব্ধির ছবি উজ্জ্বল হয়ে ওঠে।

প্রত্যেক কবির কবিতার ক্রমাগত নির্মাণ-বিনির্মাণ পর্ব বর্তমানপ্রেক্ষিত মানব অস্তিত্ব সম্পর্কে একই সঙ্গে অবহিত ও সন্দিহান করে তোলে। এর তো কোনো সমাপ্তি বিন্দু নেই, নেই কোনো ধরা-বাঁধা নিয়মও। আসলে এঁদের প্রত্যেকের অস্থিষ্ট উত্তরসূরীদের প্রয়োজনীয় ইতিহাসকে কবিতার আখ্যানে স্থাপন ও সেই সঙ্গে সমকালীন সত্য ঘটনার প্রামাণ্য ডকুমেন্ট নির্মাণ। এই কারণে তাঁদের বয়ানে সময়ের নিরাভরণ সৌন্দর্য ও রাষ্ট্রীয় শক্তির নগ্নরূপের কুশ্রীতাকে একইসময়ে উপস্থিত হতে দেখি। এঁরা কেউই মনোমুগ্ধকর কারুকার্য দিয়ে দুঃসহ সময়কে, ধ্বস্ত মনুষ্যজীবনকে সাজাতে চাননি। বরং এঁরা কেউ শব্দের মধ্যে পুরে দিয়েছেন সুতীর অভিমান ও ক্রোধকে, কেউ লিখতে চেয়েছেন আত্মনাদের উপাখ্যান, আবার কেউ হৃদয়কে উপড়ে ফেলে দেখাতে চেয়েছেন বিশ্বাসভঙ্গের বিবর্ণ পাণ্ডুলিপি। আবার কেউ অতিমারীর ভয়াবহতাকে অতিক্রম করার জন্য

ভেঙে পড়ার মুহূর্তে বিপ্লবের পতাকাকে হাতে তুলে দিয়েছেন। নিঃসন্দেহে জীবাণুটি মারাত্মক। আর জীবাণুযুদ্ধ আমাদের পৌঁছে দেয় ব্যক্তি সংকট, রাষ্ট্রীয় সংকট ও সামাজিক সংকটের গভীরে। এই বিপন্নতার ওপর দাঁড়িয়ে কবির জীবনের, জগতের বহু অপচয়কে, চৈতন্যের ভাসান কিংবা মস্তিষ্কের মড়ককে দৃঢ় প্রতিজ্ঞার সঙ্গে ব্যবহার করেছেন। আর তাই তাঁদের কবিতা যুগ-যুগান্তরেও মননের গভীরে কাজ করে চলে নিঃশব্দে, নির্জনতায়।

প্রবন্ধের আপাত-সমাপ্তিতে পৌঁছে একথা বলতে দ্বিধা নেই যে আলোচনায় অনেক কবির কথা অজ্ঞাতে, অসচেতনে অনাবিস্কৃত থেকে গেছে। এক্ষেত্রে বর্তমান প্রতিবেদকের দুর্বলতা ও ত্রুটিকে স্বীকার করে ক্ষমাপ্রার্থী। তবে একথা সত্যি, জ্বলন্ত সময়ের পরিধিকে নির্দিষ্ট একটা প্রবন্ধে সীমায়িত করা দুঃসাধ্য। এ ভাবনা নিশ্চিত, বাংলা সাহিত্য ভাণ্ডার অক্ষয়, তাই এ ভাণ্ডার বিপন্ন হবে না। জীবাণুযুদ্ধের ভয়াবহতায় ভেঙে পড়া বোধ-বিশ্বাস-বিবেক-দায়বদ্ধতা ও মানবিক সম্পর্ক নিয়ে নতুন নতুন দৃষ্টিকোণ থেকে অনেক গবেষক নিজস্ব চিন্তনের বিচ্ছুরণকে প্রজ্জ্বলিত করবেন -- এখানেই আমাদের প্রত্যাশা ও শক্তি।

আসলে অতিমারীর দুঃসহ স্মৃতি আমাদের পক্ষে ভুলে যাওয়া সম্ভব নয়। এ যেন অনেক দুঃখ-বেদনা-হতাশা-আতঙ্ক-উদ্বেগের সাক্ষী। নতুনভাবে নিজেকে চেনারও এক দৃঢ় অঙ্গীকার। কাম্যুর ‘দ্য প্লেগ’ উপন্যাসের রিভার্স মতো যদিও আমাদের মনে হয়, সব যুদ্ধের শেষে ‘such joy is always imperiled...and that perhaps the day would come when, for the bane and the enlightening of men, it would rouse us its rats again and send them forth to die in a happy city’.....^(৭০) -- অর্থাৎ এ যুদ্ধ সহজে থামবে না, তবুও আমরা ভয়াবহতাকে পেছনে ফেলে দীর্ঘ পথ হেঁটে যাওয়ার প্রত্যাশী। অতিমারীর গ্লানিতে ও রাজনৈতিক সংঘাতের অন্ধকারে সমাচ্ছন্ন ভারতের এক নাগরিক হিসাবে আর কী বলতে পারি? এক প্রশ্ন থেকে অন্য প্রশ্নের বৃত্তে নিত্য যাতায়াত আছে বলে জীবাণুযুদ্ধের বারংবার পাঠ চলতে থাকবে আরো অনেকদিন।

তবে শেষে শুধু একটাই প্রার্থনা ‘আমরা হেরে যাবো না, আমরা মরে যাবো না, আমরা ভেসে যাবো না’^(৭১) জীবনকামী মানুষের পৃথিবীর শাস্ত্রত গানে ভরে উঠুক আগামী দিনের প্রত্যুষ।

তথ্যসূত্র

- ১। জীবনানন্দ দাশ। জীবনানন্দ দাশের শ্রেষ্ঠ কবিতা। ভারবিঃ কলকাতা। দ্বিতীয় ভারবি সংস্করণ, জানুয়ারি ১৯৮৪। পৃঃ-৫৮।
- ২। সুকান্ত ভট্টাচার্য। সুকান্ত সমগ্র। সারস্বত লাইব্রেরিঃ কলকাতা। পুনর্মুদ্রণ, আশ্বিন। ১৪০২। পৃঃ-৫০।
- ৩। সংগৃহীত অংশুমান করের ফেসবুক ওয়াল থেকে, ১৯/০৫/২০২০।
- ৪। সাহিত্য অঙ্গন। জয়গোপাল মণ্ডল সম্পাদিত। ভলিউম, VI, ইস্যু-XI। জানুয়ারি- জুন ২০২০। পৃঃ-১৯৪।
- ৫। সংগৃহীত হোয়াটস অ্যাপ থেকে, কুমারেশ চক্রবর্তীঃ প্রেম, ১৫/০৪/২০২০।
- ৬। বিনয় মজুমদার। কাব্যসমগ্র প্রথম খণ্ড, সম্পদনা শ্রী তরুণ বন্দ্যোপাধ্যায়। প্রতিভাসঃ কলকাতা। তৃতীয় মুদ্রণ। ২০০৬ (বইমেলা)। পৃঃ-৪৩
- ৭। সংগৃহীত কবি অংশুমান করের ফেসবুক ওয়াল থেকে, ১৭/০৫/২০২০।
- ৮। তদেব।
- ৯। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ-১২২।
- ১০। তদেব। পৃঃ-৬০
- ১১। তদেব। পৃঃ-১১৬
- ১২। তদেব। পৃঃ-১৯১
- ১৩। তদেব। পৃঃ-৫৫
- ১৪। তদেব। পৃঃ-৫৮
- ১৫। তদেব। পৃঃ-২৩১
- ১৬। তদেব। পৃঃ-১০৯।
- ১৭। সংগৃহীত সুদীপ সরকারের ফেসবুক ওয়াল থেকে, ০১/০৫/২০২০।
- ১৮। জীবনানন্দ দাশ। প্রাগুক্ত, পৃঃ ১১৫।
- ১৯। কাজী নজরুল ইসলাম। নজরুল রচনাবলী। দ্বিতীয় খণ্ড। বাংলা একাডেমী ঢাকা, বাংলাদেশ। নজরুল জন্মশতবর্ষ সংস্করণ। মে ২০১১। পৃঃ ১১৩।
- ২০। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ ১০৮।
- ২১। তদেব। পৃঃ- ১০৯।
- ২২। তদেব। পৃঃ-৫৩।
- ২৩। তদেব। পৃঃ-৫৩।
- ২৪। তদেব। পৃঃ- ১৯১।
- ২৫। তদেব। পৃঃ-১৯১।
- ২৬। সংগৃহীত হোয়াটস অ্যাপ থেকে, জয়গোপাল মণ্ডলঃ ‘তন্ত্র শেখো; মন্ত্র থেকে তন্ত্র’। ১৫/০৫/২০২০।
- ২৭। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ ২৫৮-২৫৯।
- ২৮। তদেব। পৃঃ-২৫৮।
- ২৯। সংগৃহীত হোয়াটস অ্যাপ থেকে, আর্যতীর্থঃ ‘বসা হাঁস’ (The

- sitting duck)। ১৯/০৪/২০২০।
- ৩০। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ ২৫৪।
- ৩১। তদেব। পৃঃ-২৫৪।
- ৩২। তদেব। পৃঃ- ৫১।
- ৩৩। তদেব। পৃঃ-২২১।
- ৩৪। তদেব। পৃঃ-২২৩।
- ৩৫। সংগৃহীত হোয়াটস অ্যাপ থেকে। শান্তনু চক্রবর্তীঃ ‘হকার’, ১৭/০৫/২০২০।
- ৩৬। রবীন্দ্রনাথ ঠাকুর। সঞ্চয়িতা। বিশ্বভারতী গ্রন্থন বিভাগঃ কলকাতা। দশম সংস্করণ, বৈশাখ ১৩৮৯। পৃঃ ৮৩২।
- ৩৭। Jose Saramago, Blindness, English translation copyright @ Professor Juan Sagar, 1997. First Published in English in Great Britain in 1997 by the Harvill Press. First Harvest Edition 1999. Page-239.
- ৩৮। সংগৃহীত হোয়াটস অ্যাপ থেকে, দেবশ ঠাকুরঃ রেললাইনে ঘোড়শ লাশ। ৯/০৫/২০২০।
- ৩৯। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ৫৪।
- ৪০। তদেব। পৃঃ- ২৬৬।
- ৪১। তদেব। পৃঃ- ৬১।
- ৪২। তদেব। পৃঃ- ১৯৭।
- ৪৩। তদেব। পৃঃ- ১৯৫।
- ৪৪। সংগৃহীত হোয়াটস অ্যাপ থেকে। সঞ্জয় মুখার্জীঃ ‘মাতৃদিবসে’। ১১/০৫/২০২০।
- ৪৫। সংগৃহীত স্বপন ভট্টাচার্যের ফেসবুক ওয়াল থেকে, ‘ফেরা’, ০৯/০৫/২০২০।
- ৪৬। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ২২৬।
- ৪৭। সংগৃহীত অংশুমান করের ফেসবুক ওয়াল থেকে, ‘লাইন’ ০৯/০৫/২০২০।
- ৪৮। সংগৃহীত শ্রীজাত বন্দ্যোপাধ্যায়ের ফেসবুক ওয়াল থেকে, ০৯/০৫/২০২০।
- ৪৯। জীবনানন্দ দাশ। প্রাগুক্ত। পৃঃ ৫৫।
- ৫০। নবনীতা দেবসেন। নবনীতা দেবসেনের শ্রেষ্ঠ কবিতা। দে’জ পারলিংশিং কলকাতা। মাঘ, ১৪০১। পৃঃ২৪৬।
- ৫১। রবীন্দ্রনাথ ঠাকুর। অখণ্ড গীতবিতান। বিশ্বভারতী গ্রন্থন বিভাগঃ কলকাতা। মাঘ, ১৪০১। পৃঃ ২৪৬।
- ৫২। সংগৃহীত অংশুমান করের ফেসবুক ওয়াল থেকে, ‘মুক্তি’, ০৫/০৪/২০২০।
- ৫৩। সংগৃহীত অংশুমান করের ফেসবুক ওয়াল থেকে, ‘স্পর্শ’, ২৯/০৩/২০২০।
- ৫৪। তদেব, ‘ভুলস্বপ্ন’। ১০/০৪/২০২০।
- ৫৫। সাহিত্য অঙ্গন। প্রাগুক্ত। পৃঃ ১১৫।
- ৫৬। তদেব, পৃঃ ১১৫।
- ৫৭। তদেব, পৃঃ ১১৪।
- ৫৮। তদেব, পৃঃ ১১৩।
- ৫৯। তদেব, পৃঃ ৫৯।
- ৬০। তদেব, পৃঃ ১৯৯।
- ৬১। তদেব, পৃঃ ২০০।
- ৬২। তদেব, পৃঃ ১১১।
- ৬৩। তদেব, পৃঃ ১১০।

- ৬৪। সংগৃহীত মন্দাক্রান্ত সেনের ফেসবুক ওয়াল থেকে, 'একটি না কবিতা', ৩১/০৩/২০২০।
- ৬৫। সংগৃহীত মন্দাক্রান্ত সেনের ফেসবুক ওয়াল থেকে, 'খতিয়ান'। ১১/০৪/২০২০।
- ৬৬। সাহিত্য অঙ্গন। প্রাপ্ত। পৃঃ ১২২।
- ৬৭। সংগৃহীত বিনায়ক বন্দ্যোপাধ্যায়ের ফেসবুক ওয়াল থেকে, 'হয়তো এই দিনও কেটে যাবে'। ০৩/০৪/২০২০।
- ৬৮। সাহিত্য অঙ্গন। প্রাপ্ত। পৃঃ ২৬৯।
- ৬৯। সংগৃহীত 'একদিন' পত্রিকা। রবীন বসুঃ 'কবিতার অনন্ত যাত্রা'। ১২/০৪/২০২০।
- ৭০। Albert Camus, The Plague, Translated from the French by Stuart Gilbert, First Published 1948, Page- 150.

- ৭১। একালের কবিতা সংগ্ৰহ। কলিকাতা বিশ্ববিদ্যালয়, প্রথম প্রকাশ। ১৯৯১। পৃঃ ১০৭।

বিঃ দ্রঃ

- আমাদের কলেজের অধ্যক্ষ ড. শান্তনু চক্রবর্তী মহাশয়কে স্বরচিত কবিতা দিয়ে সহযোগিতা করার জন্য কৃতজ্ঞতা জানাই।
- 'সাহিত্য অঙ্গন' পত্রিকা ও সম্পাদক জয়গোপাল মণ্ডল মহাশয়কে যাবতীয় তথ্য ও কবিতা প্রদান এবং নিরন্তর সহযোগিতার জন্য কৃতজ্ঞতা জানাই।
- নিজের অভিজ্ঞতা আমার সঙ্গে ভাগ করে নেওয়ার জন্য আমাদের কলেজের অধ্যাপিকা অবন্তী ভট্টাচার্য্য মহাশয়াকে কৃতজ্ঞতা জানাই।

কোয়ারেন্টিন – কোভিড 19 ও বাংলা কথাসাহিত্য

মুনমুন ঘোষ

বাংলা বিভাগ

গভর্নমেন্ট জেনারেল ডিগ্রি কলেজ, সিঙ্গুর

মহাশক্তিধর অদৃশ্য আণুবীক্ষণিক শত্রুর চকিত আক্রমণের তীব্রতায় জর্জরিত সারা বিশ্ব, সমগ্র মানবজাতি। এক অভূতপূর্ব পরিস্থিতির শিকার আমরা। নিরাময়ের নিশ্চয়তাহীন আতঙ্কিত দিনযাপনের মধ্যে, মানিয়ে নেওয়ার নিত্য লড়াইয়ের মধ্যে এগিয়ে চলেছে সময়। অস্থির এই সময়ে দাঁড়িয়ে মৃত্যু ত্রাসের সঙ্গে অর্থনৈতিক বিপর্যয়, সামাজিক অবিশ্বাস, সন্দেহ রঞ্জে রঞ্জে। শ্রেষ্ঠ জীবের গর্ব ধূলিসাৎ। প্রকৃতির রুদ্ধরোধের সামনে আমরা অসহায়। সত্যিই কি রুদ্ধ রোষ! নাকি শ্রেষ্ঠত্বের অহংকার আর স্বেচ্ছাচারিতা বুমেরাং হয়ে ফিরে আসছে নিজেদের দিকে? সত্য শুধু এক বিপন্ন সময়ের মধ্যে গৃহবন্দী বেঁচে থাকা।

সৃষ্টিশীল মানুষের মন বিপন্ন সময়ের মধ্যেও সজাগ থাকে। প্রাথমিক ধাক্কা কাটিয়ে সৃজনের গতিধারা প্রকাশের পথ খুঁজে ফিরে নিরন্তর। এক্ষেত্রেও তার ব্যতিক্রম হয়নি। বই-পত্রিকার জগৎ রুদ্ধ হয়েছে কোভিড-19 এর করাল থাবায়। কিন্তু নব নির্মাণের উৎসমুখ অবরুদ্ধ করতে পারেনি। আন্তর্জালের বেড়ার ফাঁকে ক্রমাগত বিকশিত হচ্ছে নতুন সাহিত্য। বর্তমানের করোনা কবলিত অবরুদ্ধ সময়ের সংকট, যন্ত্রণা, সমস্যাকে আধার করে নির্মিত হচ্ছে নতুন নতুন কবিতা, গল্প, নাটক। উপন্যাস এখনও পাইনি আমরা। তবে এ শুধু সময়ের অপেক্ষা। নিশ্চিত বিশ্বাসে। গলিত সময়ের ত্রাসের গ্রাসে দমবন্ধ যাপনে বেঁচে থাকার সংজ্ঞা গেছে বদলে। এখন শুধু টিকে থাকার লড়াই। কবি তো বলেছেন, ‘মম্বন্তরে মরিনি আমরা। মারী নিয়ে ঘর করি।’ এ কথাই আজ জ্বলন্ত বাস্তব। তবে ‘বিধির আশীষ’ কিংবা ‘অমৃতের টীকা’ এখনও দূরগত।

করোনাকে সঙ্গী করেই হয়তো আমাদের আগামী পথ চলা।

সভ্যতার অগ্রগতির সঙ্গে পাল্লা দিয়ে বেড়েছে বিশ্বে মানুষের সংখ্যা। ক্রমবর্ধমান মানবজাতির উন্নয়নের অস্বাভাবিক গতি কমানোর পরিবর্তে বাড়িয়েছে মহামারীর প্রকোপ। মহামারী রূপান্তরিত হয়েছে অতিমারীতে। সাম্প্রতিক বৈশ্বিক অতিমারীতে স্তব্ধ জনজীবন চার দেওয়ালে বন্দী। মানবসভ্যতা প্রায় প্রতি শতাব্দীতেই মুখোমুখি হয়ে চলেছে জীবাণু সন্ত্রাসের। সাম্রাজ্যের পালাবদলও নিয়ন্ত্রিত হয়েছে জীবাণুর অদৃশ্য অঙ্গুলিহেলনে। আমরা জানি, স্মলপক্সের কবলে পড়ে ত্বরান্বিত হয়েছিল সমগ্র রোমান সাম্রাজ্যের ভাঙন। বিউবনিক প্লেগের কারণে বাইজান্টাইন সাম্রাজ্যে নেমে আসে বিপর্যয়। ‘ব্ল্যাকডেথ’ এ ইউরোপের জনসংখ্যা প্রায় অর্ধেক হয়ে গিয়েছিল। ইতিহাসে যেমন আছে সে তথ্য, তেমনি মৃত্যু কবলিত মানুষের করুণ ছবি আছে সাহিত্যের পাতায়। প্লেগ, বসন্ত, কলেরা বা ওলাওঠা, ইনফ্লুয়েঞ্জার মতো ভয়ঙ্কর সব মহামারীর তীব্রতা প্রাচ্য জনজীবনকে বিপর্যস্ত করেছে বারবার। ভারতবর্ষে শুধুমাত্র কলেরাতেই মারা গেছে কয়েক লক্ষ মানুষ। মারী কবলিত সময় জীবনের সঙ্গে সাপলুডো খেলেছে বারবার। সে ইতিহাস দীর্ঘ।

॥ বাংলা সাহিত্য ও মহামারী ॥

সময় পরিবেষ্টিত জীবনের ছায়াপাত ঘটে সাহিত্যে। বিভিন্ন ভারতীয় ভাষায় রচিত প্রাচ্য সাহিত্যের পাতায় মেলে সেসব নিদারুণ যন্ত্রণাদঙ্ক দিনের নির্মম শব্দছবি। বাংলা ভাষার সাহিত্যও তার ব্যতিক্রম নয়। বাংলার মানুষ যুগ যুগ ধরে প্রতিষেধকহীন মহামারীর

করাল দিনগুলোতে ভরসা রেখেছিল তাদের ধর্মীয় বিশ্বাস ও প্রাকৃতিক ভেষজের উপর। উদ্ভব হয়েছিল নতুন নতুন দেব-দেবীর। মধ্যযুগের বাংলা সাহিত্যে তাদের কেন্দ্র করে রচিত হয়েছে গান, পালা, স্তব-স্ততি, কাব্য প্রভৃতি। সপ্তদশ-অষ্টাদশ শতাব্দীতে কৃষ্ণরাম, মাণিকরামের শীতলামঙ্গল রচনার পশ্চাতে রয়েছে বসন্তের প্রাদুর্ভাব। দুই বাংলার প্রায় সর্বত্রই শীতলাতলা বা শীতলাখান আজও দেখতে পাওয়া যায়। মার্কণ্ডেয় পুরাণে শীতলার উল্লেখ আছে। এমনকি দক্ষিণভারতেও বসন্ত রোগের দেবী ‘শীতলাম্মা’^২ (কোথাও কোথাও মারিয়াম্মা বা কান্নিআম্মা)। বৌদ্ধ দেবী পর্ণশবরীর সঙ্গেও শীতলার সাদৃশ্য রয়েছে। উভয়েরই বাহন গাধা।^৩ জলা জঙ্গল, খাল-বিলে ভরা বঙ্গদেশে পূজিত হন ওলাবিবি বা ওলাইচণ্ডী বা বিবিমা, যিনি ওলাওঠার দেবী। অবিভক্ত বাংলাদেশে কলেরা সাধারণ মানুষের কাছে ওলাওঠা নামেই অধিক পরিচিত। সম্ভবত উনিশ শতকে ওলাবিবি বা ওলাইচণ্ডীর পুজোর প্রচলন হয় কলেরার প্রকোপ থেকে বাঁচতে।^৪ তেমনি কালাজ্বরের জন্য জ্বরাসুর, ত্বকের চুলকানির জন্য চামুন্ডাল, খোস-পাঁচড়ার জন্য পাঁচুঠাকুরের পুজোর প্রচলন রয়েছে দীর্ঘকাল ধরে। মধ্যযুগের বাংলা সাহিত্যে বহন করে চলেছে তার চিহ্ন। এখনও লোকায়ত পালাগানে সন্ধান মেলে শীতলা, বসন্তরায়, ওলাবিবি, সত্যপীর প্রভৃতি লৌকিক দেবদেবীর। এসব প্রসঙ্গ প্রতিফলিত হয়েছে আধুনিক বাংলা কথাসাহিত্যেও। তারাদাস বন্দ্যোপাধ্যায়ের ‘তারানাথ তান্ত্রিক’এ আছে জ্বরাসুরের প্রসঙ্গ। ‘তিনটে মাথা’, ‘ছটা পা, ছটা হাত’, ‘মোটা ল্যাজ’, ‘ল্যাজে আর গায়ে বড় বড় কাঁটা। গায়ের রঙ ঘোর কালো। তিনটে লাল রঙের বড়ো বড়ো চোখ হবে, তার ভেতর একটা চোখ থাকবে কপালে। লাল জিভ বের করে দাঁড়িয়ে আছেন জ্বরাসুর’।^৫ কে জানে হয়তো আগামী দিনে গোলাকৃতি, গোলাপী, কাঁটায়ুক্ত করোনা ভাইরাসও জ্বরাসুরের মতো অদ্ভুত দর্শনধারী রূপে সাহিত্যে আবির্ভূত হবে। উত্তরদিনাজপুরের রায়গঞ্জে করোনা দেবীর পুজোর কথা তো ইতিমধ্যেই শোনা গেছে।^৬

আধুনিক বাংলা সাহিত্য যদিও দেবমাহাত্ম্যমূলক নয়, তথাপি ঘটনাক্রম, বর্ণনা অনুসঙ্গে সাধারণ জনজীবন তুলে ধরতে গিয়ে প্রায়শই বিধৃত হয়েছে মারী কবলিত বাংলার চিত্র। বঙ্কিমচন্দ্রের

‘আনন্দমঠ’, রবীন্দ্রনাথের ‘চতুরঙ্গ’, শরৎচন্দ্রের ‘শ্রীকান্ত’, ‘পন্ডিতমশাই’, বিভূতিভূষণের ‘আরণ্যক’, তারাক্ষরের ‘ধাত্রীদেবতা’, ‘গণদেবতা’, মানিক বন্দ্যোপাধ্যায়ের ‘পুতুল নাচের ইতিকথা’, পাশাপাশি ওপার বাংলার জহির রায়হানের ‘হাজার বছর ধরে’, হাসান আজিজুল হকের ‘আগুনপাখি’, এমন আরও অনেক উপন্যাস, রবীন্দ্রনাথের ‘মাল্যদান’, ‘দুর্ভিক্ষ’, ‘দিদি’ প্রভৃতি, সুকুমার রায়ের ‘নানাগল্প’এর ‘পেটুক’, বিভূতিভূষণের ‘পেয়ালা’, শরৎচন্দ্রের ‘লালু’, মানিক বন্দ্যোপাধ্যায়ের ‘আরোগ্য’, সৈয়দ মুজতবা আলীর ‘পাদটীকা’, নারায়ণ গঙ্গোপাধ্যায়ের ‘পুষ্করা’, জগদীশ গুপ্তের ‘পয়োমুখম্’ প্রভৃতি নানা ছোটগল্পে আমরা পেয়েছি মারী কবলিত বাংলার নানা ছবি, প্রত্যক্ষ বা পরোক্ষ ইঙ্গিতে। বঙ্কিম, শরৎ, রবীন্দ্র থেকে শুরু করে সাম্প্রতিকের কবি লেখকদের রচনায় পরিবর্তিত চেহারার মারী-মহামারী-অতিমারী আক্রান্ত সময়ছবি প্রকটিত হয়েছে। বর্তমানের করোনা আচ্ছাদিত বিচিত্র সমস্যাবহুল দিনাতিপাতের কথাও অনুরূপভাবে ক্রমাগত অনুপ্রবিষ্ট হয়ে চলেছে সাহিত্যে। এই ভাইরাসকে সঙ্গে নিয়ে দিনযাপন করতে করতে প্রাত্যহিকের কথ্য অভিধানে প্রবেশ করেছে লকডাউন, আইসোলেশন, কোয়ারেন্টিন এর মতো সব শব্দ। সাহিত্যেও তার ছায়াপাত ঘটে চলেছে প্রতিনিয়ত। তবে বাংলা সাহিত্যে এসব শব্দের ব্যবহার কবে থেকে শুরু হল, তা জানতে আমাদের একটু অতীতচরী হতে হবে।

॥ উৎসের খোঁজে॥

গ্রীক শব্দ ‘এপিডেমিক’ এর প্রথম উল্লেখ পাওয়া যায় হোমারের ওডিসিতে।^৭ পরবর্তী সময়ে চিকিৎসাশাস্ত্রের জনক হিপোক্রেটিস চিকিৎসার পরিভাষায় ‘এপিডেমিক’ শব্দটি প্রয়োগ করেন।^৮ ৪৩০খ্রীঃপূঃ থুসিডাইডেস(Thucydides) এথেন্সের প্লেগের বর্ণনা প্রসঙ্গে শব্দটি ব্যবহার করেন।^৯ ‘এপিডেমিক’ এর বাংলা প্রতিশব্দ ‘মহামারী’ বা ‘মড়ক’। বাংলায় অবশ্য ‘মহামারী’ শব্দটি অপেক্ষাকৃত নবীন। যদিও ‘মড়ক’ ও ‘মহামারী’ একই অর্থে ব্যবহৃত হয়, তবুও ব্রিটিশ শাসনের পূর্বে বাংলায় মহামারী শব্দটি প্রচলিত ছিল না বলেই মনে হয়। মধ্যযুগের বাংলা সাহিত্যে মহাদৌরাহ্ম্য, মহাপ্রলয়,

মহাবিপদ, মহাকষ্ট ইত্যাদি নানা অর্থে বিজয়গুপ্তের মনসামঙ্গল, কবিকঙ্কণের চণ্ডীমঙ্গল, চৈতন্যভাগবত, শিবায়ন প্রভৃতি কাব্যে ‘মহামার’ শব্দটির প্রয়োগ লক্ষ্য করা যায়। সংস্কৃত ‘মরক’ থেকে বাংলা ‘মড়ক’ শব্দের উদ্ভব।^{১০} আঠারো-উনিশ শতকের বাংলায় কলেরা, ম্যালেরিয়া, বসন্তের প্রকোপ ছিল মারাত্মক। ইস্ট-ইন্ডিয়া কোম্পানির অসংখ্য কর্মচারী, লক্ষাধিক ব্রিটিশ সৈন্যের মৃত্যুর কারণ ছিল কলেরার মড়ক।^{১১} আধুনিক বাংলা সাহিত্যের গোড়ার দিকে মধুসূদনের ‘তিলোত্তমা সম্ভব’ (১৮৬০) কাব্যে আছে – ‘মড়ক ছাড়িলে পুরী পৌরজন যথা’।^{১২} আরও কিছু পরে কথাসাহিত্যে মহামারীর বিস্তৃত ছবি পাওয়া গেল বঙ্কিমচন্দ্রের ‘আনন্দমঠ’ (১৮৮২) উপন্যাসে।

বর্তমানের করোনা আবহে ‘কোয়ারেন্টিন’, ‘আইসোলেশন’, ‘লকডাউন’ এর মতো শব্দে প্রাণ পেয়েছে। পরিচিত হয়ে উঠেছে প্রাত্যহিক জীবনে। শরৎসাহিত্যে ‘quarantine’ শব্দটির প্রয়োগ দেখা যায় শ্রীকান্ত উপন্যাসের ২য় খণ্ডে। সম্প্রতি কেউ কেউ বলেছেন, ‘কোয়ারেন্টিনের সঙ্গে সেটাই বোধ হয় বাঙালি পাঠকের প্রথম পরিচয়’।^{১৩} “পরদিন বেলা এগার-বারটার মধ্যে জাহাজ রেঙ্গুন পৌঁছিবে; কিন্তু ভোর না হইতেই সমস্ত লোকের মুখচোখে একটা ভয় ও চাঞ্চল্যের চিহ্ন দেখা দিল। চারিদিক হইতে একটা অস্ফুট শব্দ কানে আসিতে লাগিল, কেরেণ্টিন। খবর লইয়া জানিলাম, কথাটা quarantine: তখন প্লেগের ভয়ে বর্ম গভর্নমেন্ট অত্যন্ত সাবধান। শহর হইতে আট-দশ মাইল দূরে একটা চড়ায় কাঁটাতারের বেড়া দিয়া খানিকটা স্থান ঘিরিয়া লইয়া অনেকগুলি কুঁড়েঘর তৈয়ারি করা হইয়াছে; ইহারই মধ্যে সমস্ত ডেকের যাত্রীদের নির্বিচারে নামাইয়া দেওয়া হয়। দশদিন বাস করার পর, তবে ইহার শহরে প্রবেশ করিতে পায়।”^{১৪} শরৎচন্দ্রের শ্রীকান্ত, ২য় পর্ব উপন্যাসের প্রকাশ ১৯১৮। সেখানে আছে রেঙ্গুনের প্লেগের কথা। প্রসঙ্গত উল্লেখ্য, শরৎচন্দ্রের স্ত্রী ও পুত্র প্লেগ রোগে মারা যান। রেঙ্গুনে প্লেগ ছড়ায় ১৯০৫। অবশ্য শরৎচন্দ্রের পূর্বে উনিশ শতকের দ্বিতীয়ার্ধে, ঔপনিবেশিক বাংলা সাহিত্যে আমরা ‘কোয়ারেন্টিন’ শব্দের ব্যবহার দেখেছি। ‘কোয়ারেন্টিন’ শব্দটির উৎপত্তি ‘কোয়ারাণ্টেনা’ থেকে, চতুর্দশ শতাব্দীতে।^{১৫} শব্দটি ইতালীয়। এশিয়া মহাদেশ থেকে ভূমধ্যসাগর

হয়ে ইউরোপ, গ্রিস, ইতালিতে জাহাজ চলাচলের সূত্রে ছড়িয়ে পড়া বিউবনিক প্লেগ আটকাতে বিশেষ ব্যবস্থা নেওয়া হয় ভেনিসে। জাহাজে কোনো প্লেগ রোগী রয়েছে এমন সন্দেহ হলে, মূল বন্দরে প্রবেশের আগে জাহাজটিকে দূরবর্তী দ্বীপে চল্লিশ দিন অপেক্ষা করতে হত। এই সময়কালকে বলে ‘কোয়ারাণ্টেনারো’। তা থেকেই ইংরেজি ‘কোয়ারেন্টিন’ শব্দের উৎপত্তি। কিন্তু ১৯০৫ এর পূর্বেই অর্থাৎ রেঙ্গুনে প্লেগ ছড়ানোর পূর্বে কোয়ারেন্টিনে থাকার প্রসঙ্গ পাওয়া যায় স্বামী বিবেকানন্দের ‘পরিব্রাজক’ গ্রন্থে। ১৮৯৯ খ্রী ২০জুন, স্বামীজী দ্বিতীয়বার পাশ্চাত্যে যাত্রা করেন গোলকোন্ডা জাহাজে। সেবারে তাঁর যাত্রা সঙ্গী ছিলেন স্বামী তুরীয়ানন্দ ও ভগিনী নিবেদিতা। জাহাজ সুয়েজ পৌঁছায় ১৪ জুলাই। “১৪ই জুলাই রেড-সী পার হয়ে জাহাজ সুয়েজ পৌঁছুল। সামনে – সুয়েজ খাল। জাহাজে, সুয়েজে নাবাবার মাল আছে। তার উপর এসেছেন মিসরে প্লেগ, আর আমরা প্লেগ আনছি সম্ভবতঃ – কাজেই দোতরফা ছোঁয়াছুঁয়ির ভয়। এ ছুঁৎ ছাঁতের ন্যাটার কাছে, আমাদের দিশী ছুঁৎ ছাঁত কোথায় লাগে! মাল নাব্বে, কিন্তু সুয়েজের কুলি জাহাজ ছুঁতে পারবে না। জাহাজে খালাসী বেচারাদের আপদ আর কি! তারাি কুলি হয়ে, ক্রেনে কোরে মাল তুলে, আলটপ্কা নীচে সুয়েজী নৌকায় ফেল্ছে – তারা ডাঙায় যাচ্ছে। কোম্পানীর এজেন্ট, ছোট লঞ্চে কোরে জাহাজের কাছে এসেছেন, ওঠবার হুকুম নেই। কাণ্ডের সঙ্গে জাহাজে নৌকায় কথা হচ্ছে। এ তো ভারতবর্ষ নয়, যে গোরা আদমী প্লেগ আইন-ফাইন সকলের পার – এখানে ইউরোপের আরম্ভ। স্বর্গে ইঁদুর-বাহন প্লেগ পাছে ওঠে, তাই এত আয়োজন। প্লেগ-বিষ, প্রবেশ থেকে দশ দিনের মধ্যে ফুটে বেরোন; তাই দশ দিনের আটক। আমাদের কিন্তু দশ দিন হয়ে গেছে – ফাঁড়া কেটে গেছে। কিন্তু মিসরী আদমীকে ছুঁলেই আবার দশ দিন আটক – তাহলে নেপলসেও লোক নামান হবে না, মার্সাইতেও নয়; কাজেই যা কিছু কাজ হচ্ছে, সব আলগোছে; কাজেই ধীরে ধীরে মাল নাবাতে সারাদিন লাগবে। রাত্রিতে জাহাজ অনায়াসেই খাল পার হতে পারে, যদি সামনে বিজলী-আলো পায়; কিন্তু সে আলো পরাতে গেলে, সুয়েজের লোককে জাহাজ ছুঁতে হবে, বস্ - দশ দিন কারাটীন(quarantine)। কাজেই

রাতেও যাওয়া হবে না, চব্বিশ ঘন্টা এইখানে পড়ে থাকো – সুয়েজ বন্দরে”^{১৩৬}

কিন্তু বিবেকানন্দের আগে কোয়রান্টিন শব্দের উল্লেখ পাওয়া যায় কৃষ্ণভাবিনী দাসের লেখায়। তিনিই প্রথম বাংলা ভ্রমণকাহিনি লেখিকা। ১৮৮২ সালে স্বামী দেবেন্দ্রনাথ দাসের সঙ্গে বিলেত যাওয়ার অভিজ্ঞতা লিপিবদ্ধ করেন ‘ইংলন্ডে বঙ্গমহিলা’ গ্রন্থে। তিন বছর পর অর্থাৎ ১৮৮৫ সালে বইটি প্রকাশিত হয়। এই গ্রন্থে ভিনদেশি জাহাজকে যাত্রী সহ ‘কোয়রান্টিন’ করার কথার উল্লেখ আছে এবং নিয়মটিও ছিল যথেষ্ট কড়া। “আমরা ব্রিগিসির এত কাছে তবু নামিতে পাই না। পাছে মিসরদেশ হইতে ওলাওঠা আসিয়া ইউরোপে বিশেষত ইতালিতে প্রবেশ করে এই ভয়ে ইটালীয়েরা জাহাজ হইতে তিনদিন নামিতে দিবে না। এই বন্দবস্তকে ‘কোয়রান্টিন’ বলে, এবং এই নিয়মটা বড় কড়া, এমন কি যখন ভারতবর্ষে বা মিসরে ওলাওঠার প্রাদুর্ভাব থাকে তখন ইহারা দশ, পনের ও কখন কখন পঁচিশ দিনও জাহাজে আটক করিয়া রাখে এবং কিনারার সহিত কোন সংস্রব রাখিতে দেয় না”^{১৩৭}

১৮৯৮- ৯৯ সালে ব্রিটিশ কলকাতায় প্লেগের প্রদুর্ভাব ঘটে। সম্ভবত এই সময় থেকেই সাধারণ মানুষ ‘কোয়রান্টিন’ শব্দটির সঙ্গে পরিচিত হয়। প্রেমাংকুর আতর্ষীর ‘মহাস্থবির জাতক’ (১৯৪৪) উপন্যাসে মেলে প্লেগাক্রান্ত কলকাতার ছবি। এসময় কলকাতায় প্লেগের প্রতিষেধক টীকার প্রচলন হয়। যারা টীকা নিতেন তাদের আর কোয়রান্টিনে থাকতে হতো না। ঔপন্যাসিক লিখেছেন, “মাস দুয়েক বাদে কর্পোরেশন থেকে আমাদের নামে একখানা কার্ড এল। সেগুলো হলো সার্টিফিকেট, অর্থাৎ প্লেগ হলে সেগুলো দেখালে আর ‘কোয়রান্টিন’ এ ধরে নিয়ে যাবে না”^{১৩৮} বুঝতে অসুবিধা হয়না যে ঔপনিবেশিক কলকাতায় টীকাহীন সন্দেহে কোয়ারেন্টিন করার বন্দোবস্ত ছিল।

॥ সাম্প্রতিক ছোটগল্প ও করোনার ছায়া ॥

অতিসাম্প্রতিকের করোনা কবলিত সময়ে ছোঁয়াচ এড়িয়ে বেঁচে থাকার তীব্র প্রচেষ্টার মধ্যে আবার জেগে উঠেছে ‘কোয়রান্টিন’এর মতো শব্দেরা। ‘কোয়রান্টিন’এর বাংলা প্রতিশব্দ হয়েছে

‘সঙ্গনিরোধ’ বা ‘সঙ্গরোধ’ এবং ‘আইসোলেশন’ এর বাংলা ‘অন্তরণ’^{১৩৯} বাংলা সাহিত্য অবশ্য এই প্রতিবর্ণীকরণে এখনও অভ্যস্ত হয়নি। কোয়রান্টিন, আইসোলেশনের যুগচিহ্ন শরীরে নিয়ে সমকাল আসছে সাহিত্যে। অতিমারী জর্জরিত সময়ের আতঙ্ক, অবিশ্বাস, যাপনযন্ত্রণা তার সংগ্রাম নিয়ে ছুঁয়ে যাচ্ছে সাহিত্যদেহ। সামান্য হাঁচি-কাশির শব্দে এখন ছড়ায় সন্দেহ। অবিশ্বাসী চোখে মানুষ তাকায় মানুষের দিকে। জীবন হারানোর ভয়কে জড়িয়ে আছে জীবিকা হারানোর দৃশ্চিন্তা। স্পর্শ আর নৈকট্যের সমাহারে সৃষ্ট সব সম্পর্কগুলো অসহায় তাকিয়ে থাকে বিপন্ন দিনের দিকে। মানুষ তো বিকল্প খুঁজতেই চায়। বিকল্প সন্ধানে তৎপর বইপোকারাও। সামাজিক দূরত্বের ধারণায় ‘আরও বেঁধে বেঁধে থাকি’র ইচ্ছেরা আবর্তিত হচ্ছে ভার্চুয়াল দুনিয়া জুড়ে। সেই প্রবণতায় নির্ভরতা বাড়ছে অনলাইন সাহিত্য চর্চায়। সমস্যা, জটিলতা সত্ত্বেও ই-বুক, ই-জার্নালের মতো নানা ই-মাধ্যমে আত্মপ্রকাশ করছে করোনাকালের সাহিত্য। মূলত গল্প ও কবিতার মধ্য দিয়ে সাহিত্যে ফুটে উঠছে করোনাসময়ের চিহ্নগুলো।

করোনা আবহের প্রেক্ষাপটে শীর্ষ বন্দোপাধ্যায়ের লেখা ছোটগল্প ‘সজল সরল সমস্যা’ আদ্যন্ত মানবিক এক কাহিনি উপস্থাপন করে। গল্পটি প্রকাশিত হয় দেশ পত্রিকায়, ১৭মে সংখ্যায়। ভাড়াবাড়িতে থাকা সরল ও ভবানীপুরে সদ্য কেনা ফ্ল্যাটের মালিক সজল, অধুনার অভিঘাতে অবস্থান করে এক সরলরৈখিক অসহায় বিন্দুতে। ব্যাংকের দৌলতে উদোর পিণ্ডি বুধোর ঘাড়ে চেপে যাওয়ার অভিজ্ঞতার অংশীদার অনেকেই। সেই পরিচিত সমস্যার মধ্যে দিয়ে লেখক ফুটিয়ে তোলেন আগাম সূচনাইন লকডাউনে বন্দী সাধারণ মানুষের জীবনে ঘনীভূত হওয়া বিপ্রতীপ সংকট। সরলের অর্ডার সাপ্লাইয়ের সামান্য ব্যবসা। লকডাউনের জেরে আটকে পড়ে তার পাওনা আদায়। অনিশ্চিত হয়ে যায় মধ্যমগ্রামে মস্ত ঝিলের দিকটায়, দোতলায় দুকামরার ফ্ল্যাটের স্বপ্ন। টান লাগে অর্থে। অপ্রতুল হয়ে যায় নিদ্রাও। কর্মহীন অখণ্ড অবসর ক্লান্ত করে। হতাশার নেশা লাগে রক্তে। করোনাভূমি শুষে নেয় মধ্যবিত্ত স্বপ্ন। হঠাৎই ফোন পায় সরল। ব্যাঙ্ক থেকে। ভুরো ফোন, জালিয়াতির চেষ্টা --- এসব যুক্তির জাল তাকে

আশ্বস্ত করতে পারে না। সন্দেহ ক্রমেই জমাট বাধে। নিশ্চিত হতে যায় ব্যাঙ্কে। অ্যাকাউন্টে টাকার অঙ্ক চমক লাগায়। ষাট-সত্তর হাজারের বেশি থাকার কথা নয়। অথচ রয়েছে, ‘পাঁচ লাখ বাহান্ন হাজার তিনশো ষাট টাকা’। বিস্মিত হয় সরল। হিসেব মেলেনা কিছুতেই। বাড়ি ফেরার পথে কানে আসে সরকারী সাহায্যের কথা, যা সরাসরি পৌঁছে যাবে অ্যাকাউন্টে। অতিমারী সময়ে সরকারি সাহায্যের বিপুল প্রচার ও আশ্বাসবাণী নিতান্ত সারল্যের সঙ্গে সে বিশ্বাস করে। সাময়িক দ্বিধার মেঘ উড়ে যায় অচিরেই। স্বপ্নপূরণের লক্ষ্যে প্রমোটারকে অগ্রিমও দিয়ে দেয়। অন্যদিকে প্রকৃত মালিকের ফোন আসে ব্যাঙ্কে। রহস্য উদ্ঘাটিত হয়। ব্যাঙ্ককর্মী মেয়েটি ভুল সংশোধনে তৎপর হলেও তা সহজ হয়না। খরচ হয়ে যাওয়া টাকা ফেরত দেওয়ার জন্য লকডাউন ওঠার পর দুমাস সময় চেয়ে নেয় সরল সরকার। কিন্তু সমাধান আদৌ সম্ভব হবে কিনা তা অনিশ্চয়তার মধ্যেই রয়ে যায়।

আপাত সরল গল্পের মধ্যে জটিলতা তৈরি করে দেয় চলমান লকডাউন। কর্মহীনতার মধ্যে সন্দিগ্ধ যাপনের দোলাচলতায় মূর্ত হয় সংকটের ছায়া। গল্পটি শুরু হয় এক অশনি সংকেতের মধ্যে। ‘এই লকডাউন উঠে গেলে যে কী হবে, ভাবতেই বুক দূরদূর করছে’^{২০} ছোট ব্যাবসায়ীদের আশঙ্কার ছবিটি স্পষ্ট। আর্থিক অসহায়তার মধ্যে ঘাড় গুঁজে পড়ে থাকে জীবন। নতুন অর্ডার নেই, পেমেন্ট নেই, আটকে আছে সবটুকু পুঁজি। সেইসঙ্গে স্বপ্নও। ‘করোনা নাকি ভয়ংকর ছোঁয়াচে। সেই ভয়ে হকাররা নাকি কাগজ তুলছে না। লোকে নিচ্ছেও না’।^{২১} কর্মহীন বন্দী দশায় মানুষের ডিজিটাল নির্ভরতা বেড়ে চলেছে। সে দুনিয়া ভেসে যাচ্ছে গৃহকর্মের ছবিতে। অথচ মানসিক শান্তি তিরোহিত। মধ্যবিত্ত পরিবারের এই ছবির পাশে অর্থবানেরও সংকট ছবি ফুটে উঠেছে বিদেশে কর্মরত সজল চরিত্রটির মধ্য দিয়ে। বিনা নোটিশে ফ্লাইট বন্ধ। দেশে ফিরতে না পারার সমস্যাকে জটিল করে তোলে দেশে একা থাকা অর্থব মায়ের অসহায়তা। ‘আমি তো বললামই আমি বিদেশে এসে আটকে গেছি। কলকাতার বাড়িতে আমার মা একা আছেন। শ্রেফ একটা কাজের লোকের ভরসায়। টাকাটা না পেলে ওদের খুব অসুবিধা হবে। আমি এত দূর থেকে করতেও

পারব না কিছু। আমার বন্ধু বান্ধবরাও যেতে পারবে না বোধহয়’।^{২২} ক্ষোভের সঙ্গে ভয় ও অসহায়তা মিশে ফুটিয়ে তুলেছে সংকট।

গল্পের মূল তিনটি চরিত্রের আলোকে প্রতিভাত হয়েছে সমাজের সম্পূর্ণ পৃথক অবস্থানে থাকা মানুষের করোনা কবলিত সময়ের যাপন সংকট। জীবিকা সংকট, অর্থ সংকটের সঙ্গে যোগ হয়েছে নিরাপত্তার সমস্যাটিও। সরল সরকার মধ্যবিত্ত ব্যাবসায়ী, যার ব্যবসা বন্ধ। সজল সরকার চাকরী সূত্রে দুবাইতে আটকে, মাইনের টাকা অ্যাকাউন্ট থেকে গায়েব। এই দুজনের সংযোগ সূত্র সেই মহিলা ব্যাঙ্ককর্মী, যার ক্রটিতে টাকার অঙ্ক গেছে বদলে। নিজের ক্রটি সংশোধনের আন্তরিক প্রচেষ্টার মধ্যেও ভবিষ্যৎ জটিলতার আশঙ্কা ঘিরে রাখে সর্বক্ষণ। অথচ এ গল্পে প্রত্যেকেই আশ্চর্যরকম মানবিক। বিপন্ন এ সময়ে ব্যাঙ্ককর্মী - গ্রাহক সম্পর্কের উর্ধ্বে তারা পরস্পরের দিকে সহযোগিতার হাত বাড়ায়। পরিস্থিতির মোকাবিলায় ‘আয় আরও বেঁধে বেঁধে থাকি’র ধারণায় পুষ্ট হয় সময়।

একটানা গৃহভ্যন্তরীণ দশা বন্দীত্বের নামান্তর। সঙ্গীতা বন্দ্যোপাধ্যায়ের ‘প্রেম আর পিপাসার গান’ গল্পটিতে সেই বন্দীত্বের কণ্ঠে মিশেছে ভার্যুয়াল জগতের মিথ্যে উৎসবের নীল বিষ। গল্পটি দেশ পত্রিকার ১৭মে সংখ্যায় প্রকাশিত হয়েছে। এ গল্প বই পাগল জিব্রাইল মিঠুর। তেমন বই পেলে সে কেঁদে ওঠে। সে এক ‘দমচাপা মানুষ’। ‘জিব্রাইল মিঠু কখনও কলেজ স্ট্রিট, কখনও নিউ মার্কেট, কখনও সদর স্ট্রীটের খাঁজে খাঁজে ঢুকে বই খুঁজে বের করে আনত। তেমন তেমন একখানা বই পেলে তাকে আমি ডুকরে কেঁদেও উঠতে দেখেছি। যেন তার কলিজার একটুকরো নিরুদ্দেশে চলে গেছিলো। আমাদের চেনাজানা হোম ডেলিভারি বই বিক্রেতাকে সে নিজের হাতে রেঁধে খাওয়ানোর জন্য মরিয়া হয়ে গেছিলো একদিন। কিছু কিছু বই সে কিনত নিজের জন্য, কিছু রাখত লাইব্রেরি তে সাজিয়ে। সে সেই বই এবং বিষয় সংক্রান্ত জ্ঞান ভালভাবে আহরণ করে, আগে-পরের সমস্ত পাঠ জড়ো করে, ধবধবে সাদা আদির পাঞ্জাবি পরে, বারবেরির পারফিউম গায়ে মেখে, উন্মুখ হয়ে বসে থাকত কোনো এক মন্তর বিকেলে কোনও এক উজ্জ্বল, অনুসন্ধিৎসু পাঠকের

অপেক্ষায়’।^{১৩} বইপাড়ায় ঘুরে বেড়ানো বইপোকাদের জিব্রাইল মিঠু আছে হয়তো। লকডাউনের বন্ধ তালয় ওপার দেখা যায় না। তাই বুঝি এই করোনাকালের আগেই তারা চলে যায়।

বর্তমান সময়ে দাঁড়িয়ে আমাদের মনে এক অজানা ভয়ের অশনি সংকেতের প্রতি ইঙ্গিত দেয়। আজকের সামাজিক দূরত্ব মেনে চলা সময় বই-এর অস্তিত্ব সংকটে ফেলবে না তো? এখনো যারা বই পড়তে ভালোবাসে, না পড়া বইয়ের গল্প শুনতে ছুটে যায় বইপাড়ার আড্ডায় – কদিন আগেও – সেই দিনেরা ফিরবে তো? নাকি আজকের করোনা কবলিত সময়ে আন্তর্জালিক গাঁটবাঁধা ডিজিটাল দুনিয়ার বাড়বাড়ন্তে বহু স্পর্শলালিত বই হারিয়ে যাবে ইতিহাসের পাতায়? আমরা আশাবাদী। যাবতীয় আশঙ্কা, ভয়, সন্দেহের কুয়াশা সরিয়ে আবার চেনা দুনিয়ায় ফিরে যাব নিশ্চই।

লকডাউনের দিনগুলিতে খাদ্যের জোগান নিয়ে উদ্বেগ ছিল প্রথম দিকে। ‘সজল সরল সমস্যা’ ও ‘প্রেম আর পিপাসার গান’ – উভয় কাহিনীতেই সে প্রসঙ্গ এসেছে। ‘অনেকে উদ্বিগ্ন হয়ে শুরু থেকেই আলুর খোসা ভেজে খেতে শুরু করে দেয়’।^{১৪} ঘুরে বেড়ায় মুখোশ আঁটা সেই সব মানুষের দল। যারা ছবি তুলে রেখে ত্রাণ বিলি করেন। ভিডিও অন করে খাবার তুলে দেন অনাহারী মুখে। শীততাপ নিয়ন্ত্রিত ঘরে নিশ্চিহ্ন আরামে বসে ঘর্মাক্ত পোষ্ট দেন সোশ্যাল মিডিয়ায়। স্বল্প পরিসরে সঙ্গীতা বন্দ্যোপাধ্যায় চিহ্নিত করেছেন এই বিষণ্ণ সময়ের অন্যমুখ। লেখকের সামাজিক দায়িত্বটি এড়িয়ে যাননি। চেনা পৃথিবীর দিকে নতুন দৃষ্টিতে তাকাতে হয়েছে। নানা রঙের মাস্ক, স্যানিটাইজার হয়ে উঠেছে অভিন্ন সঙ্গী। সেই সঙ্গে নেশাগ্রস্তের মতো করোনার আপডেট পেতে মরিয়া হতে থাকা। সোশ্যাল মিডিয়া, নিউজ চ্যানেল ঘেঁটে ঘেঁটে দিন ভর চলে অনিদ্দেশ্য বিরামহীন খোঁজ। ‘অচিরেই বোঝা যায় ফেসবুক একটা ব্লাইন্ড লেন। সেই ব্লাইন্ড লেনে দিবারাত শুধু ভালোমানুষির উৎসব চলে। মানুষ এখানে ঢুকে পড়লে ভালোমানুষ হয়ে যায়। ভাল ভাল কথা বলে, অভুক্ত মানুষের চিন্তায় নুন দিয়ে ভাত খাওয়ার কথা বলে। তারা বলে যে, অহোরাত্র তাদের বিবেকে কাঁটা ফোটে দুটো খেতে পাচ্ছে বলে। কিছু কিছু অনাহারে মৃত্যুর খবর

তাদের টাইমলাইনে ভেসে থাকে’।^{১৫} ফেসবুকের অন্ধ গলিতে চিরকাল ভালো মানুষের ভূমিকায় অভিনয় চলে না। হাঁপ ধরে যায়। পথও বন্ধ। ‘তাই তারা ফেসবুক থেকে বের হয়ে আবার কাজুবাদাম দিয়ে কফি পান করে। হাঁপ ছেড়ে বাঁচে’।^{১৬} তীক্ষ্ণ স্লেষের মধ্যে দিয়ে বিদ্রূপ ছুঁড়ে দেন লেখক দ্বিচারিতায় অভ্যস্ত মানুষের প্রতি।

আমাদের কাছেপিঠেই করোনার তীব্র বাস্তব বিস্মৃত করে অতীতকে। নিজেকে বাঁচিয়ে রাখার দুরন্ত ইচ্ছার কাছে মাথা নত করে মৃত প্রিয়জন। গৃহবন্দী জীবনে অনিবার্য হয়ে ওঠে স্মৃতিচারণার ‘ইতোইতো’। করোনা আর লকডাউনের সম্মিলিত প্রতাপে বর্তমান ঝরে পড়ে অতীতের ভূমিতে। ‘...এই করোনাকালে, এই লকডাউনের আইসোলেশনের, ভেন্টিলেশনের করোনাকালে, এই মাস ত্রেভ খোঁড়াখুঁড়ির করোনাকালে, এই মাটিতে উপোসি ছড়ানো করোনাকালে...’^{১৭} হারিয়ে যায় দিন-রাত মাসের হিসেব। ঘিরে ধরে নিঃসঙ্গতা। একাকীত্বের মায়ারী ফাঁদ আরও আষ্টেপৃষ্ঠে জড়িয়ে ধরে আমাদের। হতাশ করে। উদ্বিগ্ন দিন যাপনে ক্রমাগত ডুব দিতে থাকে মানুষ। লকডাউনে গৃহবন্দী মানুষের সেই জীবনসত্য রূপায়িত হয় সঙ্গীতা বন্দ্যোপাধ্যায়ের গল্পে। ‘করোনাকাল কবে শেষ হবে কেউ জানে না। আমার ঘুমের মধ্যেই লকডাউন বেড়ে বেড়ে যাচ্ছে। সবাই আমরা ছটফট করছি। আমরা ক্রমশ জরা, শোক আর খিদে আর অনিশ্চয়তায় ডুবে যাচ্ছি’।^{১৮} অনিশ্চয়তা আর বিষাদে ঢাকা বিপন্ন এই সময়ছবির পাশে এ গল্পে প্রতিফলিত হয়েছে পরিয়ানী মানুষের যাপনযন্ত্রণার কথা। জীবিকার সন্ধানে পরিজন বৃত্ত থেকে দূরাগত নক্ষত্র হয়ে থাকা মানুষের কক্ষপথ চ্যুতি, নিষ্ঠুরতায় চিরতরে হারিয়ে যাওয়ার কিংবা কোনোক্রমে বেঁচে ফিরে আবারও প্রতিবেশীর সন্দেহ আর অবিশ্বাসের সামনে কঠিন পরীক্ষার মুখোমুখি হওয়ার বাস্তবছবির ঝলক দেখা যায় এ গল্পে। ‘মাইগ্রেট করা শ্রমিকরা আড়াইশো মাইলের বাধা পেরিয়ে অবশেষে হয় কোনও ক্যাম্পে পৌঁছোয়, নয়তো মাঝপথেই মৃত্যুর গাডডায় গড়িয়ে পড়ে’।^{১৯}

এই করোনাকালে যারা ভাইরাসের সঙ্গে লড়াই করে ফিরিয়ে আনছে প্রাণ নিজের প্রাণের বিনিময়ে, তাদের বিনির্মিত জীবনছবি ভেসে ওঠে সাহিত্যের

পাতায়। করোনার প্রেক্ষাপটে তরুণ ডাক্তার দম্পতির সম্পর্কের টানাপোড়েনের মোচড়ে ‘এইসময়’ পত্রিকায় ধারাবাহিক গল্প লিখেছেন চিত্রনাট্যকার, পরিচালক লীনা গঙ্গোপাধ্যায়। তাঁর পাঁচটি পর্বে বিভাজিত গল্পের নাম ‘শবাধারে জ্যোৎস্না’। প্রেমের টানাপোড়েনের এ গল্পে করোনা ভাইরাসের ভয়াবহতায় চিকিৎসকের যন্ত্রণা ও মানবিকতা, পেশাগত ও ব্যক্তিগত জীবনের দ্বন্দ্ব-দীর্ঘ চিত্র আভাসিত।

গল্পের শুরুতেই টিভির পর্দায় বিরামহীন করোনা সংবাদ পরিবেশনের ক্লান্ত ছবি। বয়সের ভারে গৃহবন্দী মানুষগুলোর জীবন থেকে উবে গেছে প্রাত্যহিক সন্ধ্যার ধারাবাহিক আনন্দ। পর্দা জুড়ে অসুখ আর মৃত্যুর হিসেবের ক্রমাগত উত্থান। অন্যদিকে বাড়ির বয়স্কদের উদ্দেশ্যে হাত ধোয়া, চোখে-মুখে হাত না দেওয়ার অবিরাম সাবধান বাণী অতিষ্ঠ করে তোলে। যে সব পরিবারের সদস্য চিকিৎসক, সেখানে চিকিৎসার পারদের মাত্রা চড়ে। জীবনের ভিত্তি নাড়িয়ে দেয় আক্রান্ত হওয়ার আশঙ্কা। ‘পৃথিবীর এখন গভীর অসুখ। টিভি খুললেই সেই অসুখের খবর... কোন দেশে কতজন পৃথিবী ছেড়ে চলে গেল তার ফিরিস্তি... কী করে এই অসুখের সঙ্গে লড়াই করা হবে, কি করে নিজেকে নিরাপদ রাখতে হবে সেইসব সতর্কবিধি’^{১০} বদলে দেয় যাপনের বৈশিষ্ট্য।

অতিমারী কবলিত পৃথিবীতে চিকিৎসকরাই ত্রাতার ভূমিকায়। অথচ সেই পরিচয়ের উর্ধ্বে মানুষ হিসেবে তাদের কাছে এ এক কঠিন সময়। বেড়ে গেছে ডিউটির সময়। পর্যাপ্ত বিশ্রাম যেন মরুস্থল। ‘দিন রাত রোগী ঘেঁটে রোগীর পাশে’^{১১} জায়গা হচ্ছে অনেকেরই। গল্পের মূল দুই চরিত্র তোতা ওরফে ডক্টর শুভাঙ্গিনী ঘোষ ও ডঃ সংকল্প। রোস্টার ডিউটি শেষ হলেও থেকে যেতে হয় হাসপাতালে। ‘কখন কি এমার্জেন্সি হয়’। করোনাচ্ছাদিত সময়ে তাদের ব্যক্তিগত টানাপোড়েনের মধ্যে স্পষ্ট হয়েছে বিষাক্ত সময়ের নিষ্ঠুর কশাঘাত। পালানোর পথ নেই। দেশ-বিদেশে সর্বত্র একই ছবি। গোটা দেশ স্তব্ধ। মানুষ ঘরবন্দী। পেশার দাবীতে শুভাঙ্গিনী ওরফে তোতা বা সংকল্পের ঘরে থাকার উপায় নেই। এই সংকটকালে তারাই যোদ্ধা। নিরন্তর অদৃশ্য শত্রুর সঙ্গে লড়াইতে কখনো তারাও আক্রান্ত। হারিয়ে যাচ্ছে সহযোদ্ধা। তবুও মানবিকতার রথের গতি

অব্যাহত। ‘শবাধারে জ্যোৎস্না’য় প্রকট হয় সেই বাস্তবছবি। ধরা পড়ে ডাক্তারের পবিবারে বহু টেনশনের চোরাশ্রোত।

॥ অণুগল্পে আণবিক কোভিড-19 ॥

ছোটগল্প বা ধারাবাহিক গল্প শুধু নয়, অণুগল্পের আঁচড়েও বর্তমানের আতঙ্ক, আশঙ্কা, হতাশা সহ দিনযাপনের বিচিত্র সমারোহ। চেনা অচেনা বহু কলমে বিধৃত হয়েছে সময়ের ছবি। যাপনের রঞ্জে রঞ্জে অনুপ্রবিষ্ট অন্তর্জালে (অধিকাংশই ফেসবুকের দেয়ালে) প্রকাশিত হয়েছে অসংখ্য অণুগল্প। সবগুলিই যে শিল্প সম্মত, তা নয়। হয়তো অধিকাংশই হারিয়ে যাবে কালের গর্ভে। কিন্তু সাম্প্রতিক সময়ের ক্ষত চিহ্নগুলিকে চিনতে তাদের প্রয়োজন।

আমাদের দৈনন্দিন জীবনের ছোট ছোট বিচ্যুতি বড় বিসদৃশ হয়ে ধরা পড়েছে গৃহবন্দী যাপনচিত্রে। আপাত সুখী পরিবারের ঘুণ ধরা ছবি ফুটে উঠেছে বেশ কয়েকটি গল্পে। গৃহকর্মের আশ্রয়-সহায়ক বিহীন ভগ্নদশা করোনার করুণায় দৃশ্যত ঘরে ঘরে। গৃহকর্মীর মুখঝামটা শোনা পরিচারিকা যখন করোনার লকডাউন উজিয়ে দুমাসের বিরতির পর হঠাৎ ফিরে আসে, সে সময়ে গৃহকর্মের ক্রমবর্ধমান চাপ থেকে আসন্ন মুক্তির আনন্দ ঝিলিক দিয়ে ওঠে মনের মধ্যে। কাজের মেয়ে ‘পদ্ম’র খাতির যত্ন বেড়ে যায়। অ্যাডভান্স মাইনে পাওয়া, সংসারে স্বামী-সন্তানের সহযোগিতায় কর্মভার লাঘব হওয়া, আনন্দে নির্ভর দিন কাটানো ‘পদ্ম’র খোলতাই রূপের কাছে নিস্প্রভ, রোগা হয়ে যাওয়া, নেলপালিশবিহীন, নখভাঙা আঙুল আর ক্লান্ত মুখের গৃহকর্মীর ছবিতে বাস্তবচিত্রটি স্পষ্ট করে তোলেন শম্পা ভট্টাচার্য তাঁর ‘জয় মা/বাবা করোনা গল্পে’^{১২}। করোনা কবলিত সময় গৃহকর্মী ও ‘পদ্ম’র জীবনে বিপ্রতীপ প্রতিফলন ঘটায়। সাংসারিক এই অসংগতির ছবি আছে শর্মিষ্ঠা মিত্রের ‘ব্যস্ততা’, দেবশ্রী ঘোষ দাসের ‘মায়ের আদর’, অর্পিতা চক্রবর্তীর ‘সহানুভব’ ইত্যাদি গল্পে।

করোনা আমাদের কাছের অনেক চেনা জীবনকে বদলে দিয়েছে। সুহেলিকা কুন্ডুর লেখা ‘অসভ্য’ পাড়ার বখাটে হিসেবে পরিচিত ছেলেদের বিপদে পাশে দাঁড়ানোর গল্প। সত্তর বছরের স্বামীহীনা নির্মালা দেবীর একাকী জীবন পরিচারিকা নির্ভর। পুত্র সপরিবারে

বিদেশে। লকডাউন তাঁকে আরও নিঃসঙ্গ করে দেয়। ফ্ল্যাটের অন্যান্য প্রতিবেশীরাও খোঁজখবর নেয় না। অসুস্থ নির্মলাদেবীর পাশে এসে দাঁড়ায় বখাটে বিল্টু ও তার দল। তাদের এনে দেওয়া ওষুধে তাঁর জীবন বাঁচে। একদিন এদেরই তিনি ‘অপসংস্কৃতির দল’ বলে তকমা দিয়েছিলেন। বর্তমানের অস্থির সময়ে তিনি খুঁজে বেড়ান অপসংস্কৃতির তাৎপর্য। গৃহবন্দী জীবনের অসহায়তার সঙ্গে বার্ষিকের একাকীত্বের সমীকরণ দেখা যায় অনুদিতা দাসের ‘বন্দী’ গল্পটিতে। লকডাউন শুরুর প্রাথমিক আনন্দের রেশ মিলিয়ে যায় অচিরেই। ক্রমাগত বাড়তে থাকা লকডাউনের দৈর্ঘ্য অতনুর মধ্যে হতাশা ঘনীভূত করে। একছাদের নিচে থেকেও গান, আড্ডা, বই, হৈ-চৈ-এ ডুবে থাকা অতনুর জীবনে বৃদ্ধ বাবার অস্তিত্ব হারিয়ে গিয়েছিল। গৃহবন্দী দিনের না কাটতে চাওয়া সময়ের ভারী পাল্লা তাকে পৌছে দেয় বাবার কাছে। একটা নিশ্চিন্দ অবসরের স্বপ্ন দেখা, ওয়ার্ক-ফ্রম হোম-এর আশায় থাকা অনেক মানুষ লকডাউনের ঘোষণায় আনন্দ পেয়েছিলেন বইকি। কিন্তু সে আনন্দ স্থায়ী হয়নি। ‘প্রাত্যহিক জীবনের দৌড়ঝাঁপ’, কর্মক্ষেত্রের ‘নোংরা প্রতিযোগিতা’, ‘বিরজিকর রোজনামা চা ভিডিও’, ‘সেই ভালো না লাগা মানুষদের সান্নিধ্য’ আসলে যে জীবনকে অনেকটা গতিময় বৈচিত্র্যে ভরে রেখেছিল, সেই উপলব্ধির গল্প ‘অবসর’। সুবর্ণা মাল্লার লেখনীতে ধরা পড়েছে দীর্ঘ অবসরের ক্লাস্তচিত্র। ‘লকডাউন ২.০, অষ্টমদিন’ গল্পে লেখক সুদীপ্ত চৌধুরী নিয়ম না মেনে অকারণ কৌতুহলে বেড়িয়ে পড়া মানুষদের প্রতি হেনেছেন ব্যঙ্গের কশাঘাত। হাওড়ার এক কারখানায় কাজ করা তিন শ্রমিকের গল্প ‘মানচিত্র’। করোনা আবহে কারখানা তালা বন্ধ হলে তাদের মধ্য দিয়ে স্পষ্ট হয়ে ওঠে করোনা সময়ে মানুষের সামাজিক অবস্থান। কোথাও বাড়ানো সাহায্যের হাত। কোথাও বা সন্দেহের বিষদৃষ্টি। এর মাঝে খাদ্যের জোগানে মাঠে মাঠে অব্যাহত চাষের কাজ। যে শহরের জন্য শ্রমিক চাষী হয়ে ফসল বোনে, সেই শহরের অবিশ্বাসে ক্রমশ কুঁকড়ে যায় তারই বন্ধুজন। করোনা বিধ্বস্ত জীবনে কাজ হারানো পরিযায়ী শ্রমিকদের নিদারুণ দৈন্য, অনাহার, ক্ষুধা, মৃত্যুর কঠিন বাস্তব ছবিও ধরা পড়েছে অণুগল্পের ক্ষুদ্র ফ্রেমে। ‘পরিযায়ী’, ‘অপূর্ণ’ প্রভৃতি গল্পে তারই খণ্ড ছবি।

মানবজাতির এই সংকটকালের সূক্ষ্মাতিসূক্ষ্ম ছবির যন্ত্রণাদগ্ধকালের জীবন ফ্রেম আঁটা এক একটি ছবির মতো আমাদের সামনে উঠে এসেছে অণুগল্পের সীমিত পরিসরে। হতদরিদ্র পরিবারগুলোতে লকডাউনের কর্মহীন গৃহবন্দী জীবনের ছায়া পড়ে ভাতের থালায়। নুন ভাতের সংস্থান যেখানে নিয়ত কঠিন হয়ে ওঠে, অবোধ সন্তানের ‘মাছ-ভাত খাবো’র সামান্য বায়না পিতৃহৃদয়ে যে কত তীব্র আঘাত হানে, অপ্রতিরোধ্য অসহায়তার সেই এক চিলতে ছবি নাড়া দেয় মমত্বের গভীরে। প্রণব রায়ের লেখা ‘মাছ-ভাত’ অণুগল্পে গাঁথে থাকে খগেন মুরুর সংসারের রূঢ় কঠিন সেই বাস্তবছবি। অন্ধিতা নস্করের ‘চেনা গন্ধ’ গল্পে উঠে এসেছে করোনা প্রকোপে স্বজন হারানোর ব্যথা। করোনাকালকে আরও কঠিন করেছে আমফান। গৃহবন্দী মানুষ গৃহহীন হয়েছে আমফানের তাগুবে। সব হারানো মানুষের যন্ত্রণাছবি এঁকেছেন অনেক অণুগল্পকার। সৈকতের ‘ঝড়’, হেমন্ত গড়াই-এর ‘সতীশের মা’, ‘নিমগাছ’ আমফানের ধ্বংস স্তূপ থেকে মানুষের ফিনিক্স হওয়ার গল্প। সেই সূত্রে কোনো কোনো অণুগল্পে ফিরে এসেছে আয়লার স্মৃতি। জয় অধিকারীর ‘দশ বছর’ গল্পে সেই মৃত্যুর স্মৃতি জেগে উঠেছে। করোনা কালের যাপিত জীবনের খণ্ড-বিখণ্ড নানা মানবিক-অমানবিক, সাহায্য-ধিকার, কাছে টানা, পাশে দাঁড়ানোর বিপরীতে দূরে ঠেলে দেওয়া, সাহায্যের ছদ্মবেশে ছলনা, প্রচারমুখী মানসিকতা, প্রচারবিমুখ সেবা, দারিদ্র্যের অসহায়তা, স্বপ্নভঙ্গের কালাতিপাত, এমন কত যে জীবনের সূক্ষ্মাতিসূক্ষ্ম অনুভূতি, দর্শন, বোধের পরিসরে এই অস্থির সময় জন্ম দিয়েছে অসংখ্য অণুগল্পের^{৩৩}, তা নিয়ে পৃথক গবেষণা হতে পারে।

ভবিষ্যতের উপর আমাদের নিয়ন্ত্রণ নেই, বর্তমানেও কি আছে? কানাঘুষো শুনতে শুনতে, ভালো করে বুঝে ওঠার আগেই করোনা প্রবেশ করল ঘরে। আশেপাশের চেনা মানুষগুলো মাফে, আতঙ্কে আচেনা হয়ে যেতে থাকল ক্রমশ। বাড়তে লাগল সামাজিক দূরত্ব। মানসিকও। অবসেসিভ কম্পালসিভ ডিসঅর্ডারে আক্রান্ত মানুষের যন্ত্রণা ক্রমশ প্রসারিত করেছে তার থাবা। স্বজন হারানোর বেদনার সঙ্গে ঘরে ফিরতে চাওয়া অসংখ্য মানুষের অনাহার, প্রাত্যহিক বিপর্যয়, অনিশ্চিত যাপনের

দুশ্চিন্তায় আঁচড় লাগে সম্পর্কে। অথচ এই ধ্বস্ত সময়ের ত্রস্ত পরিবেশে প্রাণের গতিধারা বয়ে চলেছে বিচিত্র প্রবাহে। দুঃখ-সুখ, যন্ত্রণা-আরাম, ভীতি-নির্ভীকতা, সন্দেহ-বিশ্বাস, ভালোবাসা-জুগুন্স, সেবা-বিদ্বেষের দোলায় এগিয়ে চলেছে সময়। সময়কে ধারণ করে সাহিত্য। সাম্প্রতিকের ছোটগল্প-অণুগল্পে করোনাকালের সংকেত স্থায়ী রেখাপাত করে চলেছে। ডিজিটালের দুনিয়া জুড়ে নিত্য আত্মপ্রকাশ করছে অসংখ্য অণুগল্প। বলা ভালো, অণুগল্পের চাষ হচ্ছে। প্রশ্ন তাদের স্থায়িত্ব নিয়ে। মহাকালের পথে এদের মধ্যে কতগুলি যে স্থায়ী আসনের অধিকারী হবে সেকথা বলবে অনাগত ভবিষ্যৎ। তবে করোনাসময়ের গন্ধ, বর্ণে যে তারা চিহ্নিত, তা অস্বীকারের উপায় নেই। ছোট ছোট দৃশ্য সম্বলিত মালিকায় প্রলম্বিত হয় কালের ছায়া। যুগের দংশন কিংবা আশ্লেষ, সময়চিহ্নিত অণুগল্প ও ছোটগল্প ক্ষুদ্র ক্ষুদ্র ছায়াপটের মধ্য দিয়ে পরিস্ফুট করে সামগ্রিক পটভূমি। বিধৃত হয় কাল। করোনাকবলিত বর্তমান সময়ও তার ব্যতিক্রম নয়। সাম্প্রতিক অসুয়া, অবিশ্বাস, অর্থনীতির বিপর্যয়, অসাম্য, অসহায়, শক্তিত যাপনের মধ্যে মাঝে মাঝে বুদ্ধবুদ্ধের মতো ভেসে ওঠা মানবিকতার দিকগুলিও ছোটগল্প বা অণুগল্পকারদের দৃষ্টি এড়ায় নি। এই অস্থির সময়ে সেই সব মানবিক দৃশ্যপট বর্তমানের দিশা হারানো নাবিকদের কাছে দারুণচিনি দ্বীপের সন্ধান এনে দেয়। গল্পের সীমিত দেহাবয়বে লেপ্টে থাকে সময় চিহ্ন লালিত দৃশ্য। যা চকিত করে। করে ভাবিত। চিন্তন চেতনের গণ্ডি অতিক্রম করে সজোরে কড়া নাড়ে বোধের দরবারে।

তথ্যস্বর্ণ

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- ২। অসিতকুমার বন্দ্যোপাধ্যায়, বাংলা সাহিত্যের ইতিবৃত্ত, তৃতীয় খণ্ড, প্রথম পর্ব, মর্ডান বুক এজেন্সী, কলকাতা, ২০০২-০৩, পৃ ১৬৬
- ৩। তদেব
- ৪। উইকিপিডিয়া – ওলাইচন্ডী
- ৫। তারাদাস বন্দ্যোপাধ্যায়, তারানাথ তান্ত্রিক, মিত্র ও ঘোষ পাবলিশার্স প্রাঃ লিঃ, চতুর্থ পরিবর্ধিত সংস্করণ, চৈত্র, ১৪২১, কলকাতা, পৃ ৪১
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- ১০। হরিচরণ বন্দ্যোপাধ্যায়, বঙ্গীয় শব্দকোষ, দ্বিতীয় খণ্ড, সাহিত্য অকাদেমি, ষষ্ঠ মুদ্রণ, ২০০৪, পৃ ১৭১১
- ১১। বিস্তারিত তথ্যের জন্য পাঠ্য ‘শরীর, সমাজ ও রাষ্ট্র : ঔপনিবেশিক ভারতে মহামারি ও জনসংস্কৃতি (প্রবন্ধ) – দীপেশ চক্রবর্তী।
- ১২। ব্রজেন্দ্রনাথ বন্দ্যোঃ ও সজনীকান্ত দাস (সম্পাদিত), মধুসূদন গ্রন্থাবলী, বঙ্গীয় সাহিত্য পরিষদ, কলকাতা, ১৯৪০, পৃ ১৮৪
- ১৩। অনিবার্ণ মুখোপাধ্যায়, শরৎবাবুর কোয়ারেন্টিন, বংকিমের মড়ক, বাংলা সাহিত্যে মহামারী, আনন্দবাজার পত্রিকা, সম্পাদকীয়, ৭এপ্রিল, ২০২০
- ১৪। শরৎচন্দ্র চট্টোপাধ্যায়, শরৎ রচনাবলী, দ্বিতীয় খণ্ড, (শ্রীকান্ত, ২য়পর্ব, ৪র্থ পরিচ্ছেদ), তুলি-কলম, কলকাতা, জানুয়ারী ১৯৮৯, পৃ ১৯৮
- ১৫। bn.m.wikipedia.org
- ১৬। স্বামী বিবেকানন্দ, পরিব্রাজক, উদ্বোধন, রামকৃষ্ণ মিশন, কলকাতা, ১৩১২ বঙ্গাব্দ, পৃ ৮৯
- ১৭। দময়ন্তী দাশগুপ্ত (সম্পাদিত), আমাদিগের ভ্রমণবৃত্তান্ত/ উনবিংশ শতাব্দীর বঙ্গমহিলাদের ভ্রমণকথা, দ্বিতীয় পর্ব, গাঙচিল, কলকাতা, ২০১৭, পৃ ৮২
- ১৮। প্রেমাংকুর আতর্ষী, মহাশ্ববির জাতক, অখণ্ড সংস্করণ, দে’জ পাবলিশিং, কলকাতা, জানুয়ারী ২০১৬, পৃ.৫৮
- ১৯। bn.m.wikipedia.org
- ২০। শীর্ষ বন্দ্যোপাধ্যায়, সজল সরল সমস্যা, দেশ, ১৭মে ২০২০, পৃ ৪৭
- ২১। তদেব পৃ ৪৪
- ২২। তদেব পৃ ৪৭
- ২৩। সঙ্গীতা বন্দ্যোপাধ্যায়, প্রেম আর পিপাসার গান, দেশ, ১৭মে ২০২০, পৃ ৪০
- ২৪। তদেব
- ২৫। তদেব পৃ ৪০-৪১
- ২৬। তদেব পৃ ৪১
- ২৭। তদেব
- ২৮। তদেব
- ২৯। তদেব
- ৩০। লীনা গঙ্গোপাধ্যায়, শবাধারে জ্যোৎস্না, এইসময় পত্রিকা, ধারাবাহিক গল্প, ৩১/০৩/২০২০ – ০৪/০৪/২০২০
- ৩১। তদেব
- ৩২। অণুগল্পটি হোয়াটস্ অ্যাপ সূত্রে প্রাপ্ত।
- ৩৩। প্রবন্ধে ব্যবহৃত অণুগল্পগুলি ‘গল্পকুটির’এর ফেসবুক দেয়াল থেকে সংগৃহীত। ব্যবহৃত গল্পগুলি ছাড়াও এই দেয়ালে আরও অনেক অণুগল্প রয়েছে সাম্প্রতিক বিষয়ের।

করোনা আক্রান্ত সমাজ : বিধবস্ত আমরা

সংহিতা সিন্হা
বাংলা বিভাগ
সিঙ্গুর সরকারি কলেজ

১.

২০২০-এর আধুনিক পৃথিবী। আজ সমগ্র মনুষ্যজাতি ঐশ্বর্যে, সম্পদে, জ্ঞানে, গরিমায়, বুদ্ধিতে, বিচক্ষণতায় গরীয়ান। বিজ্ঞান ও প্রযুক্তির সহায়তায় এবং তার শিখরস্পর্শী সাফল্যে সে যে-কোনও ধরনের বাধাকে নিমেষে অতিক্রম করতে প্রস্তুত। সমগ্র ধরা আজ সরাঞ্জানে আমাদের করায়ত্ত। জীবজন্তু, পশুপাখি, গাছপালা, পরিবেশ, প্রকৃতির এই সুরম্য উদ্যানে উন্নতির উত্তুঙ্গ শিখরে উঠে আজ আমরাই অধীশ্বর হয়ে উঠেছি। এমনই এই স্বপ্ন দিয়ে ঘেরা ধরিত্রীতে হঠাৎ করেই মাত্র মাস চারেক হল রহস্যময় এক জীবাণুগোষ্ঠীর আবির্ভাব। সংঘবদ্ধ হয়ে তারা এই অজেয় অপরাজিত মানবজাতির বিনাশসাধনে বদ্ধপরিকর হয়ে উঠেছে। অথচ আকৃতিতে এরা অতি ক্ষুদ্র। ‘জিনিসটা নাকি একটা পিনের ডগায় যে জায়গা ধরে, তার হাজার হাজার ভাগের এক ভাগ সাইজের’^১ জীব ও জড়ের মধ্যবর্তী এই সামান্য কীটপতঙ্গর ভয়ে ভীত সন্ত্রস্ত অসহায় হয়ে পড়েছি প্রবল পরাক্রমশালী আমরা।

২.

২০১৯-এর ডিসেম্বরে চিনের উহান প্রদেশ থেকে এই ভাইরাসের জন্ম বলে মনে করা হচ্ছে এবং অচিরেই এর দ্বারা সারা পৃথিবীর বিভিন্ন দেশ সংক্রামিত হয়ে মহামারি থেকে অতিমারির রূপ নিয়েছে। একরত্তি এই কীটপতঙ্গর পোশাকি নাম করোনা ভাইরাস এবং অসুখটির নাম কোভিড-১৯ (COVID19)। সভ্যতা ও সম্পদের শীর্ষে থাকা দেশগুলি যেমন জার্মানি, ফ্রান্স, ইতালি, সুইজারল্যান্ড, বেলজিয়াম, গ্রীস, ইংল্যান্ড, স্পেন, নেদারল্যান্ড,

রাশিয়া প্রায় হতভম্ব হয়ে কোভিডের বিজয়যাত্রার শিকার হয়েছে। বিত্তশালী ক্ষমতাসীন আমেরিকার ধন-সম্পদ-শক্তি-দম্ভকে পরাস্ত করে ইতিমধ্যেই করোনা প্রায় লক্ষাধিক মানুষের প্রাণ নিয়েছে। করোনার বিষময় তাণ্ডব থেকে রেহাই পায় নি তথাকথিত দুর্বল দেশগুলিও। ভারতবর্ষ অনেকাংশেই প্রতিহত করার প্রাণপণ চেষ্টা করে যাচ্ছে। কিন্তু এই বিপুল জনসমষ্টির কারণে সে কতটা সফল হবে তা একমাত্র ভবিষ্যৎই বলবে। ভবিষ্যৎই বলবে,

‘.....জীবন তবুও
নিরালোক হয়ে রবে কত দিন?
কত দিন হতে পারে!’^২

সবথেকে আশ্চর্যের বিষয় বিশ্বের ইতিহাসে এই প্রথম একটি মারণ অসুখ মাত্র অল্পদিনেই একটা গোটা দুনিয়াকে গ্রাস করল। দ্বিতীয় বিশ্বযুদ্ধের পর এত বড় সংকট এই পৃথিবীতে আর আসে নি। কোনও নির্দিষ্ট অঞ্চলে নির্দিষ্ট সময়সীমার মধ্যে সে তার অস্তিত্বকে সীমাবদ্ধ রাখে নি। সুদূর অতীতে মহামারি সৃষ্টিকারী প্লেগ, কলেরা বা ম্যালেরিয়ার দাপট ও ভয়াবহতাকে খুব সহজেই পিছনে ফেলে দিয়েছে। কয়েকবছর আগের আতঙ্ক জাগানো করোনা ভাইরাসের সমগোত্রীয় সার্স বা সিভিয়ার অ্যাকিউট রেসপিরেটরি সিনড্রোম এবং পশ্চিম এশিয়ায় প্রাদুর্ভাব সৃষ্টিকারী মার্স বা মিডল ইস্ট রেসপিরেটরি সিনড্রোমকেও অল্পসময়ের মধ্যে প্রতিহত করা গেল। কিন্তু আজকের এই অসুখ সেই অর্থে কোনও সূচিই মানছে না। শীতের কনকনে ঠাণ্ডা কিংবা গ্রীষ্মের প্রচণ্ড দাবদাহ কোনও ঋতুর কোনও অবস্থাতেই সে কাবু হচ্ছে না। পরিবর্তে

দ্রুত থেকে দ্রুততম গতিতে এই মারণব্যাদি ছড়িয়ে পড়েছে পৃথিবীর এক প্রান্ত থেকে আরেক প্রান্তে। ১৮ মে, ২০২০ পর্যন্ত এই রোগে আক্রান্ত হয়েছে বিশ্বের ২১৬টি দেশ। আক্রান্ত রোগীর সংখ্যার পরিমাণ প্রায় ৪৬ লক্ষের অধিক। এইভাবে দ্রুত রোগ ছড়ানোর অন্যতম কারণ অবশ্য আন্তর্জাতিক এবং অন্তর্দেশীয় বিমানযাত্রা। কোভিড ১৯-এর আবির্ভাবের আগে সার্স ও মার্স ব্যাধির দ্রুত সংক্রমণের প্রধান কারণ সেই আন্তর্জাতিক বিমানযাত্রাই ছিল। বিশ্ব স্বাস্থ্য সংস্থার (হু) এক গবেষকের কথায়,

‘আগে একটি মহামারি বিশ্বের এক প্রান্ত থেকে অন্য প্রান্তে পৌঁছতে অনেক বছর সময় নিত। ফলে তখন মহামারিতে বেশি সংখ্যক মানুষ মারা গেলেও তা মূলত নিদিষ্ট পরিধিতে সীমাবদ্ধ থাকত। বর্তমানে বিমানযাত্রার মাধ্যমে খুব দ্রুত একটি সংক্রামক রোগের জীবাণু অন্য দেশে পৌঁছে যেতে পারে। তা-ও আবার যাত্রীর শরীরে রোগের কোনও লক্ষণ ফুটে ওঠার আগেই’।^৩

আর এইজন্যই যে সব জায়গায় আন্তর্জাতিক বিমানবন্দর আছে অর্থাৎ পৃথিবীর বিভিন্ন প্রান্তের মানুষজনের সঙ্গে যোগাযোগ ব্যবস্থা যত সুগম রোগের প্রাদুর্ভাবও সেই সব এলাকায় তত প্রবল। ভারতবর্ষও তার ব্যতিক্রম নয়। আর তাই প্রথমদিকে ভারতের প্রত্যন্ত গ্রাম অঞ্চলে রোগ সংক্রমণের হার অনেক কম ছিল। তুলনায় বাণিজ্যনগরী মুম্বই, রাজধানী দিল্লি, মহানগরী কলকাতা, প্রযুক্তিগর বেঙ্গালুরু, গুজরাটের আমেদাবাদ, সুরাট, মধ্যপ্রদেশের ইন্দোর কিংবা দক্ষিণ ভারতের চেন্নাই ও তার আশেপাশের জায়গায় সংক্রমণ ছড়িয়ে পড়েছে অতি দ্রুত গতিতে। ভারতে প্রথম তিনটি সংক্রমণই চিনের উহান থেকে আসা কেরালার তিন পড়ুয়ার শরীরে পাওয়া যায়।

৩.

অর্থাৎ বলা যেতেই পারে পৃথিবীতে এই অসুখ ছড়াতে শুরু করেছেন তথাকথিত উচ্চবিত্ত শ্রেণির মানুষজনরা যাদের এক দেশ থেকে অন্য দেশে নিয়মিত যাতায়াত। ইউরোপেরও বিভিন্ন দেশের অভিজাত অঞ্চলগুলিতেই এই রোগের প্রকোপ বেশি।

উদাহরণস্বরূপ প্রথমেই মনে আসে উত্তর ইতালির বিলাসবহুল অঞ্চলের কথা। এই রোগের কবল থেকে রেহাই পান নি পৃথিবীর তাবড় রাষ্ট্রপ্রধান, উচ্চপদস্থ, খ্যাতিনামা ব্যক্তির। আক্রান্ত হয়েছেন ব্রিটিশ প্রধানমন্ত্রী, স্বাস্থ্যমন্ত্রী; কানাডার প্রধানমন্ত্রীর স্ত্রী, জার্মানির চ্যান্সেলর, ইস্রায়েলের স্বাস্থ্যমন্ত্রী, ইরানের সহকারী স্বাস্থ্যমন্ত্রীর মতো ব্যক্তির। করোনা ভাইরাসের লক্ষণ দেখা দিয়েছিল রানি দ্বিতীয় এলিজাবেথের পুত্র প্রিন্স চার্লসের শরীরে। মারা গেছেন স্পেনের রাজকুমারী মারিয়া তেরেসা। হোয়াইট হাউসের ভেতরে জাঁকিয়ে বসেছে এই মারণ ব্যাদি। বাদ যান নি পৃথিবীখ্যাত খেলোয়াড়, সংবাদপাঠক, অভিনেতা-অভিনেত্রী, গায়ক-গায়িকা কেউই। ক্রমবর্ধমান মৃত্যুর খবরে সকলেই আজ ভীত-সঙ্কস্ত। জীবনের অনিশ্চয়তা, ব্যাধির আশংকা, মৃত্যুর বিভীষিকা ক্রমশ গ্রাস করছে আপামর জনসাধারণকে। ১৮ মে, ২০২০ পর্যন্ত সারা পৃথিবীতে তিন লক্ষেরও বেশি করোনা আক্রান্ত মানুষের মৃত্যু হয়েছে। বিজ্ঞানী এবং চিকিৎসকেরা প্রাণপণ চেষ্টা করে চলেছেন এই মারাত্মক অসুখের প্রতিষেধক আবিষ্কারের জন্য, বিশ্বজুড়ে চলছে নিরন্তর গবেষণা। সাধারণভাবে তাঁরা যা নিদান দিচ্ছেন কমবেশি সকলেই তা বাধ্য হয়ে মান্য করছেন। সঠিক প্রতিষেধক হাতে না আসা পর্যন্ত তাই পারস্পরিক শারীরিক দূরত্ব যা সামাজিক দূরত্ব নামে অভিহিত হচ্ছে সেটি বজায় রাখাই প্রধান প্রতিবিধান। আর তাই বিশ্বজোড়া অতিমারিকে ঠেকাতে আক্রান্ত অধিকাংশ দেশ তাদের জনজীবনকে সম্পূর্ণ রুদ্ধ করে প্রাথমিকভাবে লকডাউনের পথ গ্রহণ করেছে। বন্ধ করা হয়েছে আন্তর্জাতিক এবং অন্তর্দেশীয় বিমান চলাচল। ট্রেন বাস মেট্রোর মতো সমস্ত গণপরিবহনই সাময়িকভাবে স্তব্ধ করেছে তাদের পরিষেবা। উদ্দেশ্য একটাই - এই ভয়াবহ রোগের সংক্রমণকে যথাসম্ভব প্রতিহত করা।

৪.

ভয়ংকর বিপর্যয়ের এই সময়ে সারা দুনিয়ায় এখন সর্বাধিক ব্যবহৃত শব্দ হয়ে উঠেছে ‘লকডাউন’। আর এই লকডাউনের ফলে স্বাভাবিক জনজীবন প্রায় রুদ্ধ হয়ে পড়েছে। বিশ্বের বিভিন্ন প্রান্তে আটকে পড়েছেন কতশত মানুষ। বাড়ি থেকে

বহু দূরের কর্মস্থলে আটকে আছেন কেউ, বেড়াতে গিয়ে হোটেলের ঘরেই দিন কাটছে কত পর্যটকের, শিক্ষাপ্রতিষ্ঠানের ছাত্রাবাসে অনেক ছাত্রছাত্রীর দিনের পর দিন অতিবাহিত হচ্ছে কোনওরকমে। কেউ আবার চিকিৎসা করাতে ভিন রাজ্যে বা ভিন দেশে গিয়ে অবরুদ্ধ হয়ে পড়েছেন। দক্ষিণ ভারতের ভেলোরে চিকিৎসা করাতে গিয়ে অসুস্থ প্রিয়জনকে নিয়ে বাড়ি ফেরার জন্য দিন গুনছেন যে কত মানুষ তার ইয়ত্তা নেই। সুদূরে থেকে নিকটজনের ভাবনা, নিজ পরিস্থিতির নিয়ন্ত্রণ, উদ্বেগ আর আশংকার মধ্যে এই ভয়ংকর বিপর্যস্ত জীবনের প্রতিটা দিন অতিবাহন। আছেন কত নিঃসঙ্গ বৃদ্ধ যারা একেবারে একা থাকেন অথবা তাঁরই মতো কোনও অশীতিপর বয়স্ক জীবনসঙ্গী বা সহধর্মিণীর উপর নির্ভর করে জীবনের বাকি দিনগুলো কাটাচ্ছেন। ২০১১-র পরিসংখ্যান অনুযায়ী পশ্চিমবঙ্গে প্রায় ১৫ শতাংশ বৃদ্ধ মানুষ একেবারে একা থাকেন অথবা তাঁরই মতো আর একজন বয়স্ক সঙ্গীর সঙ্গে বসবাস করেন। আরও উদ্বেগের বিষয় একাকী বসবাসকারী বৃদ্ধার সংখ্যার নিরিখে পশ্চিমবঙ্গের স্থান ভারতবর্ষের রাজ্যগুলির মধ্যে দ্বিতীয়। প্রথম তামিলনাড়ু ২৬.৪ শতাংশ। পশ্চিমবঙ্গে শতাংশের হিসাবে সংখ্যাটা ১০.৫।^৯ এই অবরুদ্ধ ভয়ংকর পরিস্থিতিতে এক-একটা দিন যাপন করাই তাদের পক্ষে অত্যন্ত কঠিন হয়ে পড়েছে। কারণ বাড়ির অন্যান্য কাজ করার জন্য সাহায্যকারী ব্যক্তিরও তাদের সহায়তা করার জন্য কাছে আসতে অপারগ। ফলত বাড়ছে উদ্বেগ ভীতি বিহ্বলতা। এঁদের কারোর সঙ্গে যদি একজনও সন্তান বা অন্য কেউ থাকেন তাহলে তাদের বরং একটু নিশ্চিন্ততা আছে। কিন্তু একা হাতে সেই ছেলে বা মেয়েকে সামলাতে হচ্ছে সব। ঘরের কাজ, বাজার করা, মা-বাবাকে দেখাশোনা করে সমস্ত দায়িত্ব সামলানোর পর থাকছে অনলাইনে বাড়ি থেকে অফিস করার চাপ এবং চাকরিক্ষেত্রের টেনশন। ফলত পরিস্থিতি ক্রমশই জটিল থেকে জটিলতর হচ্ছে। একদিকে রোগসংক্রমণের ভয় অন্যদিকে পরিস্থিতি সামলানোর দায়। এই উভয়ের সম্মিলিত চাপের প্রভাব পড়ছে মানসিক স্বাস্থ্যেও। অবশ্য যে কোনও নিঃসঙ্গ ব্যক্তির পক্ষেই বর্তমান অবস্থা সামলানো অন্যদের তুলনায় অনেক বেশি সমস্যাবহুল। এর মধ্যে যদি

এদের সঙ্গে আবার কেউ অসুস্থ বা শিশু থাকেন তখন পরিস্থিতি আরও জটিল ও ভয়াবহ হয়ে ওঠে। মানসিক অস্থিরতা উদ্বেগ চাপ্ণল্য ক্লান্ত শরীরকে আরও কাবু করে ফেলে। ৯ মে, ২০২০ আনন্দবাজার পত্রিকায় শিশির রায়ের প্রতিবেদন থেকে জানা যাচ্ছে টেক্সাস বা সানফ্রান্সিসকোর মতো জায়গায় যেখানে ‘সিঙ্গল পেরেন্ট’ বা মূলত একা মায়েদের সংখ্যা বেশি তাঁদের আরও একটা ভয় জাঁকিয়ে বসেছে মনের মধ্যে,

‘তিনি আক্রান্ত হলে শিশুটিকে কে দেখবে? চার-পাঁচ বছরের ছোট শিশুটিকে ঘরের কাজ – নিজে খাওয়া, বাথরুম করা, বিছানা করা – ওঁরা শেখাচ্ছেন প্রাণপণে। কে খোঁজ রাখছে সেই মায়ের মনের তোলপাড়ের, যার সন্তানটি শারীরিক বা মানসিক প্রতিবন্ধে কাবু? কেউ বা প্রিয় পোষ্যটির ছবি দিয়ে লিখেছেন, আমার কিছু হলে আপনারা কেউ এসে ওকে নিয়ে যাবেন?’^{১০}

অজানিত রোগের ভয়, মৃত্যুর আশংকা, অনিশ্চয়তায় ভুগতে থাকা প্রতিটি মানুষের হতাশা উদ্বেগ আতঙ্ক বিহ্বলতা উত্তরোত্তর বৃদ্ধি পাচ্ছে। প্রিয়জন হারানোর বেদনা কিংবা আতঙ্ক নিয়ে অস্থির মানুষের মানসিক স্বাস্থ্যেরও অবনতি হচ্ছে দিনদিন। বাড়ছে আচরণগত নানা সমস্যা। সমাজতাত্ত্বিকেরা জানাচ্ছেন বাড়িতে দীর্ঘদিন বন্দি থেকে বিশেষত নাগরিক জীবনের অল্পপরিসরে বদ্ধ ছোটপরিবারে ক্রমশ জাগছে বিরক্তি, বাড়ছে গার্হস্থ্য অসন্তোষ ও হিংসা। মনে হতে পারে পরিবারের সদস্যবৃন্দ তো সময় কাটাচ্ছেন একত্রে, তাহলে একসঙ্গে থেকেও কেন বাড়ছে বিদ্বেষ? আসলে এই বিকল্প পরিস্থিতিতে বহির্জগতেরই নিজস্ব কার্যকলাপ একেবারে বন্ধ করে দিনের পর দিন একসঙ্গে সময় কাটানোর মধ্যে প্রায়ই এসে যায় একঘেয়েমি, ক্লান্তি। মনের কোণে তৈরি হয় অসন্তোষ আর বিরাগ। দিল্লি বিশ্ববিদ্যালয়ের সমাজতত্ত্বের অধ্যাপক অভিজিৎ কুণ্ডুর মতে,

‘কোয়ালিটি টাইম যদি সমাজ বিচ্ছিন্ন হয়ে, সকাল থেকে রাত পর্যন্ত শুধু একে অপরের মুখের দিকে তাকিয়ে থাকা হয়, তাতে

পরিবারের বন্ধন বাড়বে না। উল্টে মানুষ
হাঁসফাঁস করবেন মুক্তির জন্য’।^৬

যেখানে পরিবারে শান্তি ও সহাবস্থান আছে সেখানে হয়ত জাঁকিয়ে বসেছে কর্মক্ষেত্রের চাপ, অশান্তি, অনিশ্চয়তা অথবা কাজ হারানোর আতঙ্ক। অধিকাংশ কলকারখানা দোকানপাট বন্ধ। শুদ্ধ কাজকর্মের জেরে বিশ্বের অর্থনীতির অবস্থা ক্রমশই খারাপ হচ্ছে। মার্চ মাসের পরিসংখ্যান অনুযায়ী ভারতে মোট শিল্পোৎপাদন ‘সরাসরি কমেছে ১৬.৭%’।^৭ বিশেষজ্ঞদের মত অনুযায়ী আরও দীর্ঘসময় ধরে লকডাউন থাকলে এর জের চলবে অনেকদিন পর্যন্ত। রিক্সা, অটো, টোটো, ট্যাক্সির মতো নিজস্ব গণপরিবহনের চালক, হকার, দিনমজুরদের আয়ের পথ একেবারে বন্ধ। সরকার থেকে রেশন ব্যবস্থার মাধ্যমে নিত্য প্রয়োজনীয় খাদ্যদ্রব্য সরবরাহের বন্দোবস্ত করা হলেও দারিদ্র্য অনাহার জাঁকিয়ে বসছে দিনদিন। নতুন করে দারিদ্র্যের বৃত্তের মধ্যে অন্তর্ভুক্ত হয়ে পড়ছেন অগণিত মানুষ। অদূর ভবিষ্যতে তাই দুর্ভিক্ষের আশংকাও পিছু ছাড়ছে না।

৫.

করোনার মোকাবিলা করতে চিকিৎসক, স্বাস্থ্যকর্মী, পুলিশকর্মীদের অক্লান্ত পরিশ্রম ও সহায়তায় সরকার সর্বতোভাবে চেষ্টা করছেন। কিছু বাধ্যতামূলক আচরণ ও স্বাস্থ্যবিধি পালন এবং মূলত সামাজিক দূরত্ব বজায় রাখাই এখন পর্যন্ত একমাত্র উপায়। তবু তারই মধ্যে হাতে অফুরান সময় পেয়ে অনেকেই অকারণে বাইরে বেরিয়ে পড়ছেন। পাড়ার মোড়ে মাঝেমাঝেই অযথা জটলা বাড়ছে। কিছু খাদ্যরসিকের আবার রোজই বাজার যাওয়ার প্রয়োজনীয়তা দেখা দিচ্ছে। এসবই যদি আমরা নিজেরা সচেতন হয়ে বন্ধ না করি তাহলে আক্রান্তের সংখ্যা এবং মৃত্যুহারের ঊর্ধ্বমুখী রেখাচিত্রকে কিছুতেই নিয়ন্ত্রণে আনতে পারব না।

স্কুল কলেজ বা বিভিন্ন শিক্ষাপ্রতিষ্ঠানে অনলাইনে পঠনপাঠন পদ্ধতিতে আমরা অল্প অল্প করে অভ্যস্ত হতে শুরু করেছি, ডিজিটাল লেনদেনও বাড়ছে। অনভ্যস্ত ব্যক্তিও দুরূহ

বক্ষে আর এক আশঙ্কা ও অনিশ্চয়তার মধ্যেই বাড়িতে বসে মোবাইল রিচার্জ, বিদ্যুতের বিল বা প্রিমিয়াম প্রদানের মতো আর্থিক কিছু লেনদেন করতে অল্পবিস্তর পারদর্শী হয়ে উঠছেন। এসবই সাময়িক এই বিপজ্জনক পরিস্থিতিতে অতিক্রম করার প্রচেষ্টা মাত্র। এগুলি কখনই মূল ব্যবস্থার সম্পূর্ণ বিকল্প হয়ে উঠতে পারে না। কারণ ইন্টারনেট পরিষেবা বা এই পরিষেবা গ্রহণের মাধ্যমগুলি যথা অ্যান্ড্রয়েড ফোন বা কম্পিউটারের মতো দামী বৈদ্যুতিন যন্ত্র সবার কাছে খুব সহজলভ্য নয়। বিশেষত ভারতের প্রত্যন্ত গ্রাম অঞ্চলে যাঁরা বাস করেন তাঁদের পক্ষে তো এই প্রক্রিয়ার মধ্যে সামিল হওয়াই দুরূহ। এছাড়াও থাকে প্রযুক্তিগত নানা বাধা।

করোনা মোকাবিলার জন্য সবরকম যান চলাচল সীমিত হওয়ার ফলে ও সেই সঙ্গে কলকারখানা বন্ধ থাকার জন্য সারা পৃথিবীতে বায়ুদূষণের মাত্রা অনেকাংশেই কমে গেছে। আর তাই অস্বচ্ছতার চাদরে মোড়া প্রকৃতি হয়ে উঠেছে ঝকঝকে পরিষ্কার, বহুদূর পর্যন্ত সব দৃশ্যমান, আকাশের রঙ ঘন নীল। পাঞ্জাবের জলন্ধর থেকে ১০০ মাইল দূরবর্তী বরফে মোড়া হিমালয়ের চূড়াগুলি স্পষ্ট হয়ে উঠেছে যা বহু বছর অদৃশ্য ছিল। নেপালের কাঠমাণ্ডু উপত্যকা থেকে ২০০ কিলোমিটার দূরের মাউন্ট এভারেস্টের উদ্ভাসিত সৌন্দর্যে সকলে মুগ্ধ। পথিক গুহর প্রতিবেদন থেকে জানা যাচ্ছে –

‘দিল্লিতে বায়ুদূষণ ৩০ বছরে এত কম কখনও হয় নি। রোমে গতবছরের তুলনায় কমেছে ৫০ শতাংশ। আমেরিকার হিসেব, বাতাসে ক্ষতিকর নাইট্রোজেন ডাই অক্সাইডের পরিমাণ কমেছে ৩০ শতাংশ। গত পাঁচ বছরের তুলনায় প্যারিস, সিডনি, রিয়ো ডি জেনেইরো, লস এঞ্জেলস এবং বেঙ্গালুরু শহরে বায়ুদূষণ কমেছে ৪৬, ৩৮, ২৬, ২৯ এবং ৩৫ শতাংশ। ১২৫ কিলোমিটার দূর থেকেও হিমালয় দেখা যাচ্ছে। ৩০ বছরে এই প্রথমবার! এই সব তথ্য স্বস্তিদায়ক হত, যদি তা সাময়িক না হয়ে স্থায়ী হত’।^৮

প্রকৃতি তার পুরনো রূপ উদ্ধার করে আসলে

আমাদের আত্মস্বরী প্রাণতাকে সমাচ্ছন্ন করে তুলেছে। এই বিষাদময় বিভীষিকাগ্রস্ত অন্তহীন বিমর্ষ অবকাশে আমাদের এক নতুন উপলব্ধি জাগ্রত হয়। এতকাল আমরা যারা আপনারে লয়ে মত্ত ছিলাম, তারা আবার সকলের তরে, সকলের জন্য মনের কোণে এক ব্যাকুলতা অনুভব করতে লাগলাম। মানুষে মানুষে বিভেদ, দূরত্ব কোথায় যেন এক মিলনের সন্ধি গড়ে তুলতে চাইল। আমরা আমাদের অন্তরে অন্দরে দৃষ্টি ফেরালাম। করোনার শৃঙ্খল ভাঙার জন্য কোথাও কী আমরা মনের কোণে মানবশৃঙ্খল গড়ে তুললাম! রোজই নিত্যনতুন দুঃসংবাদ ও আতঙ্কের উর্ধ্বমুখী রেখাচিত্র কোথাও যেন আবার আমাদের মাটির পানে আঁখি মেলতে শেখাল। জাতি, ধর্ম, ধনী, দরিদ্র, দেশ-বিদেশের বিভেদ ভুলে এই একরঙা জীবগুণগোষ্ঠী আমাদের শিক্ষা দিয়ে গেল অপরাজেয় বলে কেউ নেই। ক্ষমতার দস্তে উন্নত মানুষ মাত্র কয়েক পলকেই নিঃশেষে মুছে যেতে পারে এই বসুন্ধরা থেকে। আচমকা এই জীবগুণ আক্রমণ আমাদের যেন জানিয়ে দিয়ে গেল আমরা কত দীন, কত হীন, কত দুর্বল, কত অসহায়। প্রযুক্তি, কৌশল, বুদ্ধি, সম্পদের শীর্ষে গিয়েও; মঙ্গলগ্রহে ঘরবাড়ি বানাবার স্বপ্ন দেখলেও আমাদের অস্তিত্ব অত্যন্ত ক্ষণস্থায়ী। আমাদের ক্ষমতা অত্যন্ত সীমিত। তবু 'আমরা তো তিমিরবিনাশী হতে চাই'।^{১০} তাই

মৃত্যুর সন্নিকটে এসেও আমরা বলি,
'ইতিহাসে ঘুরপথ ভুলপথ গ্লানি হিংসা অন্ধকার ভয়
আরো ঢের আছে, তবু মানুষকে সেতু থেকে
সেতুলোক পার হতে হয়'।^{১১}

তথ্যসূত্র :

- ১। পথিক গুহ, মুখোমুখি মোকাবিলা, আনন্দবাজার পত্রিকা, ১৭ মে, ২০২০।
- ২। জীবনানন্দ দাশ, 'অনেক মৃত বিপ্লবী স্মরণে', জীবনানন্দ দাশের শ্রেষ্ঠ কবিতা, দ্বিতীয় ভারবি সংস্করণ, সপ্তম মুদ্রণ, ভারবি, কলকাতা, সেপ্টেম্বর ১৯৮৮, পৃ:১৬৩।
- ৩। দেবাশিষ ঘড়াই, বিমানে যেন শুধু যাত্রীরাই ওঠেন, প্যাথোজেন নয়! আনন্দবাজার পত্রিকা, ১৭ মে, ২০২০।
- ৪। Monner Alam, Sumit Mazumder, Indrani Chakravarty, Pratima Yadav, 'Living Arrangement and family Relations', The Status of Elderly in West Bengal, 2011, UNFPA February 2014, pg.18.
- ৫। শিশির রায়, ক্রান্তিকালে মায়েরাই বিপ্লবী, আনন্দবাজার পত্রিকা, ৯ মে, ২০২০।
- ৬। শান্তনু ঘোষ, লকডাউনে ব্যাহত সামাজিক জীবন, বাড়ছে গার্হস্থ্য হিংসা, আনন্দবাজার পত্রিকা, ১৫ মে, ২০২০।
- ৭। শিল্পোৎপাদনে রেকর্ড পতন মার্চে, আনন্দবাজার পত্রিকা, ১৩ মে, ২০২০।
- ৮। পথিক গুহ, মুখোমুখি মোকাবিলা, আনন্দবাজার পত্রিকা, ১৭ মে, ২০২০।
- ৯। জীবনানন্দ দাশ, 'তিমিরহননের গান', জীবনানন্দ দাশের শ্রেষ্ঠ কবিতা, প্রাগুক্ত, পৃ:১০৭।
- ১০। জীবনানন্দ দাশ, 'আশা-ভরসা', জীবনানন্দ দাশের শ্রেষ্ঠ কবিতা, প্রাগুক্ত, পৃ:১৬৫।

মারির ইতিবৃত্তঃ নির্বাচিত বাংলা ও সংস্কৃত সাহিত্যের নিরিখে

সৌম্য কুমার মিশ্র

সংস্কৃত বিভাগ

গভর্ণমেন্ট জেনারেল ডিগ্রি কলেজ, সিঙ্গুর

‘হঠাৎ দেশে উঠলো আওয়াজ হো-হো, হো-হো, হো-হো...’। না, আওয়াজটা বর্তমানে হয়, হয়। এই কদিনের ঘটনা সমগ্র পৃথিবীর মানবজাতির জাত্যাভিমানকে যেন টলিয়ে দিয়েছে। আর হবে নাই বা কেন? আপনি চাইলেই এখন সবকিছু কাজ ইচ্ছামতো করতে পারবেন না। বাচ্চাদের বিদ্যালয়ে যাওয়া বন্ধ, বড়োদের অফিস-কাছারি বন্ধ, সিনেমা জগতে অভিনয় বন্ধ, খেলোয়াড়দের মাঠে যাওয়া বন্ধ, আরো কতকিছু ‘না’ এর মাঝে আছে শুধু করোনা। টিভি, রেডিও, সংবাদপত্র খুললেই তার জানান দিচ্ছে। কিন্তু এ আওয়াজ সত্যি কি হঠাৎ, নাকি এর এক সুদীর্ঘ ইতিহাস আছে? এসব কথা বিচারের দায়ভার ঐতিহাসিকদের হলেও একজন সাহিত্যের ছাত্র হিসাবে সামান্য বুদ্ধিবলে এসকল ঘটনার প্রতিফলন সাহিত্যে যেরূপ ধরা হয়েছে তার অল্পসল্প আলোচনা করাই এই লেখার উদ্দেশ্য, যেহেতু আমরা জানি- ‘Literature is the mirror of the society’. তাই নির্বাচিত সংস্কৃত ও বাংলা সাহিত্যকে আশ্রয় করে আজকের চর্চিত যে শব্দগুলো অর্থাৎ মারি, মহামারী, অতিমারী বা মড়ক ও তার চিকিৎসা এবং তার প্রতিরোধের উপায়স্বরূপ সামাজিক দূরত্ব-র (Social Distancing) তুলনায় যথার্থ শারীরিক দূরত্ব (Physical Distancing), সঙ্গরোধ বা পৃথক্করণ (Quarantine), বিচ্ছিন্নকরণ বা স্বতন্ত্রীকরণ (Isolation), নির্বিষকরণ (Sanitization), লক ডাউন (Lock down) ইত্যাদি বিষয় পর্যালোচনের প্রয়াসই এই লেখার মূল অভিষ্ট।

মারি বা মহামারী বা মড়ক এবং অতিমারী (Epidemic and Pandemic) :

কবির ক্রান্তদর্শী। আর সংস্কৃত সাহিত্যে যারা লোকান্তর রচনা করেছেন তারা সবাই কবি। কবির মানসপটে ত্রিকালের কথা শোনা যাবে, তাই স্বাভাবিক। বাংলা সাহিত্যের ক্ষেত্রে মহামারীর বা অতিমারী পরিবর্তে মড়ক শব্দের ব্যবহার বেশী পাওয়া যায়, সংস্কৃত ‘মরক’ শব্দ থেকে যার উৎপত্তি। হরিচরণ বন্দ্যোপাধ্যায় তাঁর *বঙ্গীয় শব্দকোষ* গ্রন্থে ‘মহামারী’ শব্দের অর্থ করেছেন – ‘মহামারাত্মক রোগ, বিসূচিকা, সংক্রামক রোগ এবং অতিশয় মরক বা মহামড়ক।’^১ ‘মহামারি’ শব্দ প্রসঙ্গে মহামারের অর্থ দেখতে বলেছেন। সেই অনুসারের মহামারের কয়েকটি অর্থ এখানে নেওয়া যেতে পারে- ‘মহা-উপদ্রব, মহাবিপদ বা মহাকষ্ট, মহা-হাহাকার, মহা-হত্যাকাণ্ড’ ইত্যাদি।^২ এই গ্রন্থানুসারে ‘মারি’ শব্দার্থের কয়েকটি হল- মারণ, উৎপাত, মরক, মড়ক, বসন্তরোগ’ প্রভৃতি।^৩

শব্দকল্পদ্রুমে ‘মরক’ শব্দের ব্যুৎপত্তি দেখিয়েছেন- ‘ম্রিযন্তে জনাঃ যস্মাৎ। মৃ + অপাদানে অপ্। ততঃ স্বার্থে সংজ্ঞায়াং বা কন- মরকঃ, যার অর্থ মারিঃ/ মারী, মারকঃ (মডক ইতি ভাষা। তৎপর্যায়ঃ)।’^৪ যদিও শব্দকল্পদ্রুমে এপ্রসঙ্গে কামন্দকীয় নীতিসার গ্রন্থের যে উদ্ধৃতি দেওয়া হয়েছে তাতে ভ্রম আছে- ‘হুতাশনো জলং ব্যাধির্দুর্ভিক্ষো মরকস্তথা।’^৫ এস্থলে কামন্দকীয় নীতিসারে চতুর্দশ সর্গের বিশতম শ্লোকে ‘মরণং’ এর উল্লেখ দেখা যায়।^৬

‘মরক’ শব্দের উৎপত্তি প্রসঙ্গে বাচস্পত্যম্ গ্রন্থে বলা হয়েছে মৃ ধাতুর সঙ্গে বৃণ্ প্রত্যয়

যোগে শব্দটি নিষ্পন্ন। এর অর্থ করা হয়েছে- ‘দৈবিকভৌতিকোপদ্রব্যস্বে প্রাণিনাম কালমরণে (মড়ক), মারিভবে।’⁷

Monier Monier-Williams তাঁর *A Sanskrit-English Dictionary* গ্রন্থে ‘মহামারী’ শব্দের অর্থ করেছেন- ‘Destroying Goddess, a form of Durgā and spell called from her, a pestilence causing great mortality, the cholera’.⁸

কৌটিলীয় অর্থশাস্ত্রে ‘কণ্টকশোধন’ নামক চতুর্থ অধিকরণের আটাত্তরতম প্রকরণের ‘উপনিপাত-প্রতীকারঃ’ নামক তৃতীয় অধ্যায়ে এপ্রসঙ্গে উল্লেখ দেখতে পাওয়া যায় - ‘তেন মরকো ব্যাখ্যাতঃ। তীর্থাভিষেচনং মহাকচ্ছবর্ধনং গবাং শ্মশানাবদোহনং কবন্ধদহনং দেবরাত্রিং চ কারয়েৎ।’⁹ দেশে ‘মরক’ উপস্থিত হ’লে রাজা তাঁর প্রজাদের দ্বারা গঙ্গাদিতীর্থে স্নান, মহাকচ্ছের অর্থাৎ সমুদ্র বা বরণদেবের পূজা, চাল ও ছাতু দ্বারা নির্মিত কবন্ধের বা শির-হীন শরীরের শ্মশানে দাহ এবং স্থানবিশেষে দেবার্চনা পূর্বক রাত্রি জাগরণ করাবেন। আবার অষ্টম অধিকরণের ১৩০তম প্রকরণের চতুর্থ অধ্যায়ে আচার্য কৌটিল্যের বক্তব্য দৈবী পীড়া পাঁচ রকমের যথা- অগ্নি, উদক (বন্যা প্রভৃতি), ব্যাধি, দুর্ভিক্ষ ও মরক বা মহামারী। ব্যাধি ও দুর্ভিক্ষের মধ্যে কৌটিল্যের আচার্য ব্যাধিকে বেশী কষ্টদায়ক বলেছেন। কিন্তু কৌটিল্য এই মতের খণ্ডন করে বলেছেন ব্যাধি দেশের একটি মাত্র প্রদেশে থেকে পীড়ন করতে পারে এবং ঔষধ প্রয়োগে তার প্রতিকার সম্ভব। দুর্ভিক্ষ বা মড়ক সমস্ত দেশকে পীড়িত করে এবং প্রাণিগণের জীবনকে সঙ্কটাপন্ন করে। কৌটিলীয় অর্থশাস্ত্রে পৃথক লাইনে উল্লেখ থেকে দুর্ভিক্ষের থেকেও মরক বেশী ভয়ঙ্কর তা বুঝতে অসুবিধা হয় না - ‘সর্বদেশপীড়নং দুর্ভিক্ষং প্রাণিনামজীবনাযেতি। তেন মরকো ব্যাখ্যাতঃ।’¹⁰

এবার পালি থেকে বঙ্গভাষায় অনূদিত জাতকের কাহিনী দেখা যেতে পারে। গৌতমবুদ্ধের অতীত জন্মসমূহের বৃত্তান্ত নিয়ে ফৌসবেল কর্তৃক সম্পাদিত *জাতকার্থবর্ণনা* নামক মূল পালি গ্রন্থের বঙ্গানুবাদ করেন বিদগ্ধ পণ্ডিত ঈশানচন্দ্র ঘোষ। তাঁর সম্পাদিত গ্রন্থের নাম *জাতক*। এই গ্রন্থের ১৭৮ সংখ্যক জাতকটি হ’ল ‘কচ্ছপ জাতক’।

এই গল্পের প্রারম্ভিকাংশে এক ব্যক্তির ‘অতিবাহক রোগ’ থেকে মুক্তির কথা আছে। এই রোগ প্রসঙ্গে ঈশানচন্দ্র ঘোষ জানিয়েছেন- ‘অহিবাতক রোগ যে কি তাহা বুঝা কঠিন। ইংরাজী অনুবাদক মনে করেন যে ইহা এক প্রকার ম্যালেরিয়া জ্বর, কারণ তরাই অঞ্চলের লোকের নাকি বিশ্বাস যে বিষধর সর্পের নিঃশ্বাস হইতেই এই রোগের উৎপত্তি। অহি শব্দের আরও অনেক অর্থ আছে- যথা মেঘ, জল, নাভি ইত্যাদি। অতএব ‘অহিবাতক’ রোগে হয় বর্ষাকালীন কোনপ্রকার জ্বর, নয় ওলাউঠা প্রভৃতি কোন সংক্রামক পীড়া বুঝাইবে, এইরূপ সিদ্ধান্ত অসঙ্গত নহে। ধর্মপদার্থকথায় ইহার এইরূপ বর্ণনা দেখা যায়- “ইহা আবির্ভূত হইলে প্রথমে মক্ষিকা মরে, তাহার পর ক্রমে মূষিক, কুক্কট, শূকর, গা ও দাসদাসী এবং সর্বশেষে গৃহস্থামী আক্রান্ত হয়। ভিত্তিতে সুরঙ্গ প্রস্তুত করিয়া তাহার ভিতর দিয়া পলাইয়া যাওয়াই এই রোগ হইতে অব্যাহতি পাওয়ার একমাত্র উপায়।” তবে কি বুঝিতে হইবে ইহা প্লেগ বা তৎসদৃশ কোন মহামারী?’¹¹ আবার চতুর্থ খণ্ডের ৪৭৪ সংখ্যক গল্প ‘আত্মজাতকে’ অহিবাতক রোগের উল্লেখ আছে। বারাণসীরাজ ব্রহ্মদত্তের সময়ে তাঁর পুরোহিতকুল এই রোগে বিনষ্ট হয়েছিলেন বলে জানতে পারা যায় এই গল্পে।¹² মারি বা মহামারী বা মড়ক সম্পর্কিত অনেক বর্ণনা বাংলা সাহিত্যের ছড়িয়ে ছিটিয়ে বিদ্যমান। সাহিত্যসম্রাট বঙ্কিমচন্দ্র চট্টোপাধ্যায় *আনন্দমঠ* উপন্যাসের প্রথমাংশে মন্বন্তর থেকে মহামারীর চিত্র নিখুঁতভাবে ফুটিয়ে তুলেছেন- ‘লোকে প্রথমে ভিক্ষা করিতে আরম্ভ করিল, তারপরে কে ভিক্ষা দেয়! - উপবাস করিতে আরম্ভ করিল। তারপরে রোগাক্রান্ত হইতে লাগিল... খাদ্যাভাবে গাছের পাতা খাইতে লাগিল, ঘাস খাইতে আরম্ভ করিল, আগাছা খাইতে লাগিল। ইতর ও বন্যেরা কুক্কুর, ইন্দুর, বিড়াল খাইতে লাগিল। অনেকে পলাইল, যাহারা পলাইল, তাহারা বিদেশে গিয়া অনাহারে মরিল। যাহারা পলাইল না, তাহারা অখাদ্য খাইয়া, না খাইয়া, রোগে পড়িয়া প্রাণত্যাগ করিতে লাগিল। রোগ সময় পাইল, জ্বর ওলাউঠা, ক্ষয়, বসন্ত। বিশেষতঃ বসন্তের বড় প্রাদুর্ভাব হইল। গৃহে গৃহে বসন্তে মরিতে লাগিল। কে কাহাকে জল দেয়, কে কাহাকে স্পর্শ করে। কেহ কাহার

চিকিৎসা করে না; কেহ কাহাকে দেখে না; মরিলে কেহ ফেলে না। অতি রমণীয় বপু অটালিকার মধ্যে আপনা আপনি পড়ে। যে গৃহে একবার বসন্ত প্রবেশ করে, সে গৃহবাসীরা রোগী ফেলিয়া ভয়ে পালায়।”¹³ ২০২০তে এই অতিমারীর দাপটে লাশেদের ভিড় যেন আনন্দমঠ-এর স্মৃতিকে উসকে দেয়। উন্নত দেশ আমেরিকাকেও খুঁড়তে বাধ্য হয় গণহারে কবর দেওয়ার জায়গা।¹⁴ আর আমাদের খুঁজতে হয় ধাপার মাঠে প্রান্তিক শ্মশান বা বাগমারির কবরস্থান।¹⁵ বিজ্ঞানের চূড়ায় উঠে আজকের মানব বিশ্বজনীন। তাই দেশান্তরে রোগের আমদানি-ও খুব সহজ। পূর্বে যা ছিল স্থানীয় বা প্রাদেশিক, আজ তা সার্বত্রিক। তাই উহান থেকে সমগ্র ভূবন এক ক্ষুদ্রাতিক্ষুদ্র ভাইরাসের বিশ্বজুড়ে বিজয়কেতন উড়াতে লাগে মাত্র কয়েক মাস!

বিশ্বকবি রবীন্দ্রনাথ ঠাকুরের বিখ্যাত কথা কাব্যগ্রন্থের অভিসার কবিতায় বসন্তরোগে আক্রান্ত বাসবদত্তার কথা সাহিত্যপ্রেমীদের অজানা নয়। সন্ন্যাসী উপগুপ্তের চরণোপান্তে পড়ে থাকা রমণীর যে চিত্র ফুটিয়ে তুলেছেন কবিবর, তা এরকম-

‘নিদারুণ রোগে মারীণ্ডিকায় ভরে গেছে তার অঙ্গ।

রোগমসী-ঢালা কালি তনু তার

লয়ে প্রজাগণে পুরপরিখার

বাহিরে ফেলেছে করি পরিহার বিষাক্ত তার সঙ্গ।’¹⁶

১৯১৪ সালে প্রকাশিত রবীন্দ্রনাথ ঠাকুরের উপন্যাস চতুরঙ্গ-এ জ্যাঠামশাই জগমোহনের কথা বাংলা সাহিত্যপ্রেমীরা মনে থাকা স্বাভাবিক। উদার ও ঋজু চরিত্রের মানুষটি মারা যান মর্মান্তিকভাবে। সেই খবর আমাদের জানাচ্ছে শ্রীবিলাস -‘পাড়ায় প্লেগ দেখা দিল। পাছে হাসপাতালে ধরিয়া লইয়া যায় এজন্য লোকে ডাক্তার ডাকিতে চাহিল না।’¹⁷

দারিদ্র্য ও মহামারীর চিত্র বিভূতিভূষণ বন্দ্যোপাধ্যায়ের আরণ্যক (১৯৩৯) উপন্যাসে জোরালোভাবে উপস্থাপিত। উপন্যাসের নায়ক সত্যচরণের বিবরণানুসারে- ‘সেবার শুয়োরমারি বস্তিতে ভয়ানক কলোরা আরম্ভ হইল, কাছারিতে বসিয়া খবর পাইলাম। শুয়োরমারি আমাদের এলাকার মধ্যে নয়, এখান থেকে আট-দশ ক্রোশ দূরে, কুশী ও কলবলিয়া নদীর ধারে। প্রতিদিন এত

লোক মরিতে লাগিল যে, কুশী নদীর জলে সর্বদা মড়া ভাসিয়া যাইতেছে, দাহ করিবার ব্যবস্থা নাই।’¹⁸ বর্তমানে গঙ্গা ও যমুনা নদীতে ভেসে আসা লাশের খবর যেন উপন্যাসের বর্ণিত অংশের অনুরণন।

কাছারির কিছু লোককে সঙ্গী করে সত্যচরণ সেই ডাক্তার-কবিরাজশূন্য বস্তিতে যায়, যদি কোনও উপকারে লাগতে পারে। সেখানে রাজু পাঁড়ে সত্যচরণকে বাড়িগুলি ঘুরিয়ে দেখায়। সত্যচরণের কথায়- ‘কি ভয়ানক দারিদ্র্যের মূর্তি কুটারে কুটারে। সবই খোলার কিংবা খড়ের বাড়ি, ছোট ছোট ঘর, জানালা নাই, আলো-বাতাস ঢোকে না কোনও ঘরে। প্রায় সব ঘরেই দু-একটি রোগী, ঘরের মেঝেতে ময়লা বিছানায় শুইয়া। ডাক্তার নাই, ওষুধ নাই, পথ্য নাই।’¹⁹

এরকম এক মুমূর্ষু রোগীর কুটারে সত্যচরণ পৌঁছে দেখে এক শয্যাশায়ী স্বামীকে দেখবার কেউই নেই, তার স্ত্রী ছাড়া। রোগীর তখন শেষ অবস্থা, শয্যার পাশে তার স্ত্রী। এমন সময় সত্যচরণের চোখে পড়ে -‘তাকের উপর একটা আঢাকা পাথরের খোরায় দুটি পান্তা ভাত। ভাতের উপর দু-দশটা মাছি বসিয়া আছে। কি সর্বনাশ! ভীষণ এশিয়াটিক কলোরার রোগী ঘরে, আর রোগীর নিকট হইতে তিন হাতের মধ্যে ঢাকাবিহীন খোরায় ভাত।’²⁰

প্রতিষেধ ও প্রতিবিধান :

আসলে এজাতীয় মারির কারণ, প্রতিষেধ ও প্রতিরোধ সম্পর্কে প্রাচীন ভারতীয় শাস্ত্র সদা সচেতন ছিল। অবশ্যই সমকালীন যুগের প্রেক্ষিতে। তার সাথে আজকের তথাকথিত সুপারস্পেশালিটি হাসপাতালের চিকিৎসার তুলনা নিতান্ত মূঢ়সম। ‘ব্যাদে সব আছে!’ -এজাতীয় মস্করা যারা করেন তাদের জ্ঞাতার্থে জানাই প্রাচীন অথর্ববেদ কুষ্ঠ, যক্ষ্মা, জ্বর, কাশি, শ্লেষ্মাদি জনিত রোগ ও পুষ্টিকর্মাদি প্রতিবিধান সম্পর্কিত আলোচনায় সমৃদ্ধ। এছাড়াও কতো রোগের আলোচনা আছে তার ইয়ত্তা নেই। কিন্তু মারি সম্পর্কিত রোগগুলি এখানে প্রণিধানযোগ্য।

মানিক বন্দ্যোপাধ্যায়ের পুতুল নাচের ইতিকথা-র নায়ক শশী ডাক্তারকে বাংলা সাহিত্যের পাঠককুলের মনে থাকা স্বাভাবিক। গ্রামের দুঃখী

মানুষদের সাহায্যার্থে শশী চেয়েছিল নিজের গ্রামেই থেকে যেতে। গাওদিয়া গ্রামের অন্যতম বিপদ ছিল মহামারী। কলেরা, টাইফয়েড, কালাজ্বর ও বসন্তের মতো ব্যাধিগুলির প্রাদুর্ভাব দেখা দিত যখন তখন। শশী ডাক্তার তার সাধের সীমা অঙ্গি চেষ্টা করেছিল। কিন্তু একার পক্ষে কতদূর করা সম্ভব? অশিক্ষা ও কুসংস্কারে আচ্ছন্ন গ্রামের মানুষগুলি স্বাস্থ্যবিধির কোনও নিয়ম জানতো না বা জানলেও মানতো না। ‘গাওদিয়া-র বর্ষা বা বসন্ত ঋতু তাই বড় সুন্দর ছিল না। লেখক মানিক বন্দ্যোপাধ্যায় আর্দ্র-কর্দমাক্ত পল্লীকে দেখেছেন জীবাণুর তীর্থ হিসেবে; শশী ডাক্তারের কাছে ‘গাওদিয়া’ ছিল অনন্ত নরক-পর্যটন।’^{২১}

তারাক্ষর বন্দ্যোপাধ্যায়ের *গণদেবতা* উপন্যাসে কলেরার বিস্তৃত উল্লেখ পাওয়া যায়। গ্রামে ছড়িয়ে-পড়া কলেরাকে প্রতিহত করতে নায়ক দেবনাথ তার যুবক সঙ্গীদের নিয়ে অনেক চেষ্টা করেছিল। প্রতিবেশিনী দুর্গার কাছ থেকে দেবনাথ জানতে পারে যে তার ছোটো ছেলেকেও ধরেছিল এই সংক্রমণ। প্রাণনাশক কলেরায় শুধু তার খোকা নয়, মারা যায় খোকার মা বিলুও।^{২২}

চিকিৎসাবিদ্যার পাশাপাশি দেব-দেবীদের নিকট মঙ্গলকামনায় প্রার্থনার চল বহুদিনের। *পুরোহিত* দর্পণ প্রভৃতি গ্রন্থে এর স্পষ্ট প্রমাণ প্রতীয়মান হয়। এই গ্রন্থে *আরোগ্যসংমীত্র*^{২৩}, *জ্বরপূজা*^{২৪} প্রভৃতি আচারবিধি বর্ণিত। তিনটি মাথা, নয়টি চোখ, ছয়টি হাত ও তিনটি পা বিশিষ্ট জ্বর দেবতা, পূর্বে যিনি ছিলেন জ্বরাসুর, পরবর্তী ক্ষেত্রে তিনি শীতলা দেবীর সঙ্গে পূজিত হন।^{২৫} রোগ নিরাময়ের দেবীরূপে শীতলা বা ওলাবিবির উত্থান পুরাণ ও মধ্যযুগীয় বাংলা সাহিত্যে দেখা যায়। যার ফলস্বরূপ শীতলামঙ্গল জাতীয় কাব্যের উত্থান পরিলক্ষিত হয়।

মারি বা মহামারীতে বিবেকানন্দ ও রামকৃষ্ণ মিশনের ভূমিকা সর্বজনবিদিত। তাই আলোচনার সংক্ষিপ্ত পরিসরে বিশেষ এক ঘটনার উল্লেখ করা যেতে পারে। নিউজ-১৮ সংবাদমাধ্যমের ২৯শে জুন, ২০২০ অনলাইন সংস্করণে অর্ক দেবের লেখা ‘প্লেগে বাংলায় ‘লকডাউন’, পথে নিবেদিতা, বেলুড় মঠ বিক্রি করতে চেয়েছিলেন বিবেকানন্দ’ শীর্ষক প্রতিবেদনে প্লেগ মহামারীতে বিবেকানন্দের ভূমিকা

এস্থলে প্রণিধানযোগ্য। এই প্রতিবেদনে প্রকাশিত স্বামী অজ্ঞানন্দ রচিত ‘স্বামীজীর পদপ্রান্তে’ গ্রন্থে উল্লিখিত ১৮৯৮ সালের প্লেগ সম্পর্কিত রামকৃষ্ণ মিশন কর্তৃক প্রচারিত আবেদন পত্রে দেখা যায়-

“কলিকাতা নিবাসী ভাইসকল!

১। আমরা তোমাদের সুখে সুখী ও তোমাদের দুঃখে দুঃখী, এই দুর্দিনের সময় যাহাতে তোমাদের মঙ্গল হয় এবং রোগ ও মারীভয় হইতে অতি সহজে নিষ্কৃতি হয়, এই আমাদের চেষ্টা ও নিরন্তর প্রার্থনা।

২। যে মহারোগের ভয়ে বড়, ছোট, ধনী, নির্ধন, সকলে ব্যস্ত হইয়ে শহর ছাড়িয়া যাইতেছে, সেই রোগ যদি যথার্থই আমাদের মধ্যে উপস্থিত হয় তাহা হইলে তোমাদের সকলের সেবা করিতে করিতে জীবন যাইলেও আমরা আপনাদিগকে ধন্য জ্ঞান করিব, কারণ তোমরা সকলে ভগবানের মূর্তি।...

৩। তোমাদের নিকট আমার সবিনয় প্রার্থনা অকারণে ভয়ে উদ্ভিন্ন হইও না।...

৪। ভয় কিসের? কলিকাতায় প্লেগ আসিয়াছে বলিয়া সাধারণের মনে যে ভয় হইয়াছে তাহার বিশেষ কোনও কারণ নাই। আর আর স্থানে প্লেগ যেরূপ রূদ্রমূর্তি হইয়াছিল, ঈশ্বরেচ্ছায় কলিকাতায় সেরূপ কিছু নাই। রাজপুরুষেরাও আমাদের প্রতি বিশেষ অনুকূল।

৫। এস, সকলে মৃত্যুভয় ছাড়িয়া ভগবানের অসীম দয়াতে বিশ্বাস করিয়া কোমর বাধিয়া কর্মক্ষেত্রে নামি, শুদ্ধ ও পবিত্র ভাবে জীবনযাপন করি। রোগ ও মারীভয় প্রভৃতি তাঁহার কৃপায় কোথায় দূর হইয়া যাইবে।

৬। (ক) বাড়ি, ঘরদুয়ার, গায়ের কাপড়, বিছানা, নর্দমা, প্রভৃতি সর্বদা পরিষ্কার রাখিবে।

(খ) পচা বাসি খাবার না খাইয়া টাটকা পুষ্টিকর খাবার খাইবে। দুর্বল শরীরে রোগ হইবার অধিক সম্ভাবনা।

(গ) মন সর্বদা উৎফুল্ল রাখিবে। মৃত্যু সকলেরই একবার হইবে। কাপুরুষ কেবল নিজের মনে ভয়ে বারংবার মৃত্যুযন্ত্রণা ভোগ করেন।

(ঘ) অন্যায়পূর্বক যারা জীবিকা অর্জন করেন, যাহারা অপরের অমঙ্গল ঘটায়, ভয় কোনও কালে তাহাদের ত্যাগ করে না। অতএব এই

মৃত্যুভয়ের দিনে এই সকল বৃত্তি ত্যাগ করিবে।

(ঙ) মহামারীর দিনে গৃহস্থ হইলেও কাম ক্রোধ হইতে বিরত থাকিবে।

(চ) বাজারে গুজবাদি বিশ্বাস করিবে না।

(ছ) ইংরাজ সরকার কাহাকেও জোর করিয়া টিকা দিবে না। যাহার ইচ্ছা হইবে সেই টিকা লইবে।

(জ) জাতি, ধর্ম ও স্ত্রী লোকের পর্দা রক্ষা করিয়া যাহাতে আমাদের বিশেষ তত্ত্বাবধানে নিজের হাসপাতালে রোগীদের চিকিৎসা হয় তজ্জন্য বিশেষ চেষ্টার ক্রটি হইবে না। ধনী লোক পালাক, আমরা গরীব। গরীবের মর্মবেদনা বুঝি। জগদম্ভা সকল নিঃসহায়ের সহায়; মা অভয় দিতেছেন- ভয় নাই, ভয় নাই !!

৭। হে ভাই, যদি তোমার কেহ সহায় না থাকে অবিলম্বে বেলুড় মঠে, শ্রীভগবান রামকৃষ্ণ দাসদিগের নিকট খবর পাঠাইবে। শরীরের দ্বারা যতদূর সাহায্য হয় তাহার ক্রটি হইবে না। মায়ের কৃপায় অর্থসাহায্যও সম্ভব।

বিশেষ দ্রষ্টব্য- প্রতিদিন সন্ধ্যাকালে পল্লীতে পল্লীতে মারীভয় নিবারণের জন্যে নাম সংকীর্তন করিবে।

এই কাগজটি বিলিবন্টন নিয়ে সেদিন মঠের সন্ন্যাসীদের কম বিপদে পড়তে হয়নি। ... বিবেকানন্দের মনে ছিল প্লেগ হাসপাতাল তৈরির সংকল্প। তার জন্যে বেলুড়ের জমি বিক্রি করতেও প্রস্তুত ছিলেন তিনি। ভক্তদের উদ্দেশ্যে তিনি বলেন, “আমরা যে গাছতলার ফকির ছিলাম, সেই গাছতলাতেই থাকব।”²⁶

প্রসঙ্গত মানুষের দুর্দিনে যে এক শ্রেণীর মানুষ কালোবাজারি বা অসৎ উপায়ে উপার্জন করে সে বিষয়ে বিবেকানন্দ সজাগ ছিলেন। এখনও সংবাদমাধ্যমে নিত্যদিনের সংবাদে স্যানিটাইজারের কালোবাজারি হোক বা কোনও কোনও বেসরকারী হাসপাতালের অন্যায় মুনাফা-সংবাদে; এসব কথা আরো বেশী করে মনে করায়। আবার ক্রোধের থেকে বিরত থাকার কথা যুগাবতার বলে গেলেও ঠিক তার উল্টো চিত্র সংবাদমাধ্যমে পাওয়া যাচ্ছে। শুধু গার্হস্থ্য হিংসার বলি শয়ে শয়ে লোক। আজকের

দিনে ই-জমানায় গুজব ছড়ায় তড়িৎ গতির ন্যায়। আক্রান্ত সম্পর্কে কোনোরকম গোপনীয়তা বজায় না রেখে তাঁর ছবিসহ সমস্ত তথ্য বাজারীকৃত করা যেন এক চমৎকার কৃতিত্বের কাজ! তার সঙ্গে যুক্ত হয় গুজবের মিশেল এবং তা দাবানলের মতো ছড়িয়ে পড়ে সামাজিক মাধ্যমে।

সঙ্গরোধ বা পৃথক্করণ (Quarantine) :

এই অতিমারীর আক্রমণ যাদের উপর এসেছে অর্থাৎ করোনাগ্রস্ত রোগীদের এবং সেইসব রোগীদের সংস্পর্শে যেসকল লোকেরা এসেছেন তাদের ডাক্তারবাবুরা অন্ততপক্ষে ১৪ দিন কোয়ারেন্টাইনে থাকার পরামর্শ দিচ্ছেন। এবিষয়ে প্রাচীন আয়ুর্বেদের নির্দেশিকা স্মরণীয়। প্রথিতযশা কবিরাজ বাগ্‌ভট বিভিন্ন সুপ্রাচীন আয়ুর্বেদ শাস্ত্রসমূহ থেকে সারাংশ নিয়ে *অষ্টাঙ্গরুদয়* নামে একটি বিখ্যাত আয়ুর্বেদ গ্রন্থ লেখেন যা কালোত্তীর্ণ হয়ে আজকের দিনেও এই নতুন বিষ-প্রশমনে অগ্রণী ভূমিকা নিয়েছে। তাঁর গ্রন্থের ছয়টি স্থানের মধ্যে অন্তিম স্থান হল *উত্তরস্থান*। এর ৩৭-তম অধ্যায়ে ‘কীটলুতা’দি বিষ প্রতিষেধ’ সম্পর্কে বর্ণনা আছে - ‘একবিংশতিরাত্রেণ বিষং শাম্যতি সর্বথা।’ (৩৭/৬৬, *উত্তরস্থানম্*, *অষ্টাঙ্গরুদয়ম্*) অর্থাৎ একবিংশতি রাত্রিতে বিষ সর্বপ্রকারে প্রশমিত হয়।²⁷

বাংলা সাহিত্যে শরৎচন্দ্র চট্টোপাধ্যায় তাঁর *শ্রীকান্ত* উপন্যাসের দ্বিতীয় পর্বে ‘কোয়ারেন্টাইন’ শব্দের উল্লেখ করে ঘটনার বিবরণ দিয়েছেন- ‘পরদিন বেলা এগারো-বারোটোর মধ্যে জাহাজ রেস্‌সুনে পৌঁছবে; কিন্তু ভোর না হইতেই সমস্ত লোকের মুখচোখে একটা ভয় ও চাঞ্চল্যের চিহ্ন দেখা দিল। চারিদিক হইতে একটা অস্ফুট শব্দ কানে আসিতে লাগিল, কেবলিন্। খবর লইয়া জানিলাম, কথটা quarantine: তখন প্লেগের ভয়ে বর্মী গভর্নমেন্ট অত্যন্ত সাবধান। শহর হইতে আট-দশ মাইল দূরে একটা চড়ায় কাঁটাতারের বেড়া দিয়া খানিকটা স্থান ঘিরিয়া লইয়া অনেকগুলি কুঁড়েঘর তৈয়ারি করা হইয়াছে; ইহারই মধ্যে সমস্ত ডেকের যাত্রীদের নির্বিচারে নামাইয়া দেওয়া হয়। দশদিন বাস করার পর, তবে ইহারা শহরে প্রবেশ করিতে পায়। (শ্রীকান্ত, দ্বিতীয় পর্ব)²⁸

সামাজিক দূরত্ব (Social Distancing) বা শারীরিক দূরত্ব (Physical Distancing) :

কৃতিবাসী রামায়ণে রাম, সীতা ও লক্ষ্মণাদি চরিত্রগুলো অবতাররূপে বর্ণিত। কবি কৃতিবাস কয়েকটি ক্ষেত্রে অলৌকিকতার আশ্রয় নিয়েছেন। বাল্মীকি রামায়ণে নেই অথচ বেশ কিছু অলৌকিক ঘটনায় পুষ্ট কৃতিবাসী রামায়ণ। কিন্তু ঘটনার গভীরে গিয়ে নিবিড় পর্যালোচনা করলে নতুন আঙ্গিক ধরা পড়ে, যেমন লক্ষ্মণ-গণ্ডি বা লক্ষ্মণ-রেখা। কৃতিবাসের বর্ণনায় - “গণ্ডি দিয়া বেড়িলেন লক্ষ্মণ সে ঘর। প্রবেশ না করে কেহ ঘরের ভিতর।”²⁹ এই রেখা অগ্নিতোজোসম। দেবতার এই রেখা লঙ্ঘন করতে সাহস করেন না, মানুষ বা রাক্ষস তো দূরের কথা। অপশক্তিদমনে নিজেদের ঘরে থাকার বার্তা যেন ফুটে ওঠে কৃতিবাসের বর্ণনায়। বর্তমানে কালের দাবীতে ওষুধের বা নিত্য প্রয়োজনীয় সামগ্রীর দোকানে বৃত্তাকার বলয়ে থাকার অভিজ্ঞতায় সমৃদ্ধ হন ক্রেতাসকল।

এপ্রসঙ্গে কথাসাহিত্যিক শরৎচন্দ্র চট্টোপাধ্যায়ের শ্রীকান্ত উপন্যাসের কথা ধরা যাক। এর দ্বিতীয় পর্ব বেরিয়েছিল ১৯১৮ সালে। রাজলক্ষ্মীর থেকে বিদায় নিয়ে বর্মা দেশে (আজকের মায়ানমার) যাচ্ছে শ্রীকান্ত। কলকাতার জাহাজঘাটায় পৌঁছে দেখে, সার বেঁধে দাঁড়িয়ে রয়েছে চোদ্দো পনেরোশো মানুষ। কৌতূহলের বশে শ্রীকান্ত যা জানতে চেয়েছিল তার কিয়দংশ এখানে উপস্থাপিত হ’ল-

‘একজন হিন্দুস্থানীকে জিজ্ঞাসা করিলাম, বাপু, বেশ তো সকালে বসেছিলে – হঠাৎ এমন কাতার দিয়ে দাঁড়ালে কেন? সে কহিল, ডগদরি হোগা? ডগদরি পদার্থটি কি বাপু? লোকটি পিছনের একটা ঠেলা সামলাইয়া বিরক্তমুখে কহিল, আরে, পিলেগকা ডগদরি।’

এই ‘পিলেগ’ যে আসলে প্লেগ, তা তখনও বোঝেনি শ্রীকান্ত। কিছুক্ষণ পরে অবশ্য সে আরো খোঁজখবর করে জানে, ‘বর্মায় এখনও প্লেগ যায় নাই, তাই এই সতর্কতা। ডাক্তার পরীক্ষা করিয়া পাশ করিলে তবেই সে জাহাজে উঠিতে পাইবে।’³⁰

বিচ্ছিন্নকরণ বা স্বতন্ত্রীকরণ (Isolation) :

আজকের দিনে ‘বার্ড ফ্লু’ বা ‘সোয়াইন ফ্লু’ পরিচিত নাম। এধরনের ফ্লু মারির আকার নিতে বেশি সময় নেয় না। কৌটিলীয় অর্থশাস্ত্রে ‘কণ্টকশোধন’ নামক চতুর্থ অধিকরণের আটাত্তরতম প্রকরণের ‘উপনিপাত-প্রতীকারঃ’ নামক তৃতীয় অধ্যায়ের আলোচনা এস্থলে প্রাসঙ্গিক- ‘পশুব্যাধিমরকে স্থানান্তরিতীরাজনং স্বদৈবতপূজনং চ কারয়েৎ।’³¹ অর্থাৎ পশুদের মধ্যে মহামারী উপস্থিত হলে তাদের অন্য গোশালাদিতে নিয়ে যেতে হবে, প্রয়োজনীয় দ্রব্যের দ্বারা নীরাজনা বা আরতি করাতে হবে এবং পশুদের নিজ নিজ দেবতার পূজা করাতে হবে। প্রসঙ্গত অসুস্থ পশুকে স্থানান্তর করার যে নিদান কৌটিল্য দিয়েছেন তার যথার্থ্য আজও প্রশ্নাতীত।

হস্তপ্রক্ষালন (Handwashing) :

কথায় বলে- ‘ঠেলায় না পড়লে বিড়াল গাছে ওঠে না।’ বাইরে থেকে ঘরে ফিরে হাত-পা ধোয়ার অভ্যাস আমাদের দীর্ঘদিনের এবং এবিষয়ে শাস্ত্রনির্দেশও সুপ্রাচীন। গতিময়তার জীবনে আমরা অনেকেই এই সংস্কার ভুলতে বসেছিলাম। মনুসংহিতার নাম শুনলে যারা ‘রে রে’ করে ওঠেন, তাদের জ্ঞাতার্থে জানানো যেতে পারে যে- এগ্রহে বিস্তৃতভাবে শুদ্ধিকরণের বিষয় আলোচিত হয়েছে। এই অতিমারীতে সাবান দিয়ে অন্ততপক্ষে ২০ সেকেন্ড হস্তপ্রক্ষালন নির্দিষ্ট করে দিয়েছেন বিশ্ব স্বাস্থ্য সংস্থা। হাত ধোওয়া বিষয়ে আমাদের সুপ্রাচীন শাস্ত্রের নিদানও লক্ষ্য করার মতো। নিজ অঙ্গ হোক বা বস্তুই হোক, শুদ্ধিকরণের বিষয়ে মনুসংহিতায় অনেক শ্লোক পাওয়া যায়। শোধনীয় বাহ্যদ্রব্য যেরকম আমাদের পার্শ্বব দেহ বা অঙ্গপ্রত্যঙ্গ হোক কিংবা মলিন বা অপবিত্র বস্তুই হোক, মাটি ও জলের দ্বারা শুদ্ধ হয়- ‘মৃণ্ডোযৈঃ শুধ্যতে শোধ্যং...’ (মনুসংহিতা, ৫/১০৮)³²। এর পরবর্তী শ্লোকে শরীর, মন, আত্মা ও চিন্তার শুচিতা বিষয়ে খুব সুন্দর শ্লোক পাওয়া যায়-

‘অর্দ্ধির্গাত্রাণি শুধ্যন্তি মনঃ সত্যেন শুধ্যতি।
বিদ্যাতপোভ্যাং ভূতাত্মা ঋদ্ধির্জ্ঞেনেন শুধ্যতি।।’
(মনুসংহিতা, ৫/১০৯)

অর্থাৎ শরীর কোনোরকম মালিন্যযুক্ত হ’লে

জলদ্বারা শুদ্ধ হয়, মন দূষিত হ'লে সৎ চিন্তা বা সত্যবাক্যের দ্বারা শুদ্ধ হয়, বিদ্যা (সাংখ্যতত্ত্ব ও বেদান্ত অভ্যাসজনিত জ্ঞান) ও তপস্যার দ্বারা ভূতাত্মার শুদ্ধি হয় এবং বুদ্ধি শুদ্ধ হয় তত্ত্বজ্ঞানের দ্বারা।³³

নির্বিকরণ (Sanitization) :

খাদ্যদ্রব্যশুদ্ধির ব্যাপারেও মনুসংহিতা-তে 'অবক্ষুতম্' নামে একটি পদ পাওয়া যায়, যার অর্থ হ'ল যে খাদ্যদ্রব্যের উপর হাঁচি পড়েছে তাকে শুদ্ধ করতে হবে।³⁴ আজকের দিনে ডাক্তারবাবুদের নির্দেশে স্যানিটাইজের প্রয়োগ দ্বারা বা জলের দ্বারা বা কয়েক দিন আলাদা রেখে দেওয়ার মাধ্যমে বস্তুশুদ্ধির কথা বলা হচ্ছে। এপ্রসঙ্গে মনুর নির্দেশ- দেবতার ব্রাহ্মণের পক্ষে তিনটি বস্তুকে শুদ্ধ বা পবিত্র ব'লে স্থির ক'রে দিয়েছেন- প্রথমত, যে দ্রব্যের কোনও প্রকার সংস্পর্শদোষ দৃষ্ট হয়নি, দ্বিতীয়ত, যা জল দিয়ে ধুয়ে ফেলা হয়েছে, এবং তৃতীয়ত, শিষ্টজনেরা যে বস্তু সম্বন্ধে পবিত্র ব'লে নির্দেশ করেছেন-

ত্রীণি দেবাঃ পবিত্রাণি ব্রাহ্মণানামকল্পয়ন্।

অদৃষ্টমন্ডিনিগিতং যচ্চ বাচা শ্র প্রস্যাতে।।

(মনুসংহিতা, ৫/১২৭)³⁵

'অদৃষ্টম্' পদের ব্যাখ্যা করতে গিয়ে মনুসংহিতার বিখ্যাত টীকাকার কুল্লুকভট্ট বলেছেন- 'কেনাপি প্রকারেণোপঘাতহেতুসংসর্গমদৃষ্টং'। এইরূপ প্রাচীন বস্তুসংস্পর্শদোষ ও তার শুদ্ধিকরণের কথা শুনে আজ মনে কেমন যেন অনুরণিত হয়- 'পুরোনো চাল ভাতে বাড়ে'।

লক ডাউন :

সাহিত্যসম্রাট বঙ্কিমচন্দ্র চট্টোপাধ্যায় ছিয়াত্তরের মঙ্গুরকে অবলম্বন করে লেখা আনন্দমঠ উপন্যাসের প্রথমাংশে লিখছেন- '১১৭৬ সালে গ্রীষ্মকালে এক দিন পদচিহ্ন গ্রামে রৌদ্রের উত্তাপ বড় প্রবল। গ্রামখানি গৃহময়, কিন্তু লোক দেখি না। বাজারে সারি সারি দোকান, হাটে সারি সারি চালা, পল্লীতে পল্লীতে শত শত মৃগায় গৃহ, মধ্যে মধ্যে উচ্চ নীচ অট্টালিকা। আজ সব নীরব। বাজারে দোকান বন্ধ, দোকানদার কোথায় পলাইয়াছে ঠিকানা নাই। আজ হাটবার, হাটে হাট লাগে নাই। ভিক্ষার দিন,

ভিক্ষকেরা বাহির হয় নাই। তন্তুবায় তাঁত বন্ধ করিয়া গৃহপ্রান্তে পড়িয়া কাঁদিতেছে, ব্যবসায়ী ব্যবসা ভুলিয়া শিশু ক্রোড়ে করিয়া কাঁদিতেছে, দাতারা দান বন্ধ করিয়াছে, অধ্যাপকে টোল বন্ধ করিয়াছে; শিশুও বুঝি আর সাহস করিয়া কাঁদে না। রাজপথে লোক দেখি না, সরোবরে স্নাতক দেখি না, গৃহদ্বারে মনুষ্য দেখি না। বৃক্ষে পক্ষী দেখি না, গোচারণে গোরু দেখি না, কেবল শ্মশানে শৃগাল-কুকুর।'³⁶ শূন্যতার চিত্র এতো সুন্দরভাবে উপস্থাপন সাহিত্যসম্রাটের পক্ষে সম্ভব। আজকের লক ডাউনে দাঁড়িয়ে এসব ঘটনাবলীর সজীবতা মোক্ষম উপলব্ধি করা যায়। যদিও সময়ের সাথে সাথে চিত্রগুলো কিছুটা পরিবর্তিত। এখন মৃগায়ের বদলে ঘরবাড়ী ইউ-কাঠময়, পাকাপোক্ত রাস্তাঘাট, রাস্তায় রাস্তায় আলো ইত্যাদি। কিন্তু স্তব্ধতা তো স্তব্ধতাই। মাঝে মাঝে অ্যান্ডুলেসের আওয়াজে বা নিত্য প্রয়োজনীয় সামগ্রীর গাড়ীর আওয়াজে কিংবা দমকলের গাড়ীর শব্দে নীরবতা ভাঙলেও পরিবেশ শূন্যতায় গ্রস্ত।

কবি মোহিতলাল মজুমদারের 'কালবৈশাখী' কবিতায় কালবৈশাখীর ভয়ঙ্কর রূপ বর্ণনার পরে বলেছেন-

'এত যে ভীষণ, তবু তাকে হেরি ধরায় ধরে না হর্ষ
ওরি মাঝে আছে কাল-পুরুষের সুগভীর পরামর্শ।'

তাই এত নৈরাশ্যের মধ্যে কিছু আশার আলো খোঁজা যাক। কোভিড ১৯ ও তজ্জনিত লক ডাউনের জেরে বায়ু, জল প্রভৃতি দূষণের মাত্রা কমেছে। তাতে ধরিত্রীমাতা ও তার সন্তানেরা (মানবজাতি বাদে) যেন নতুনভাবে উজ্জীবিত হয়েছে। তার ফলস্বরূপ প্রচুর ঘটনার সাক্ষী হয়েছি আমরা। তাদের মধ্যে কয়েকটি যেমন- নৈনিতালের নৈনি হ্রদের জলস্তর বৃদ্ধি ও জলের স্বচ্ছতা বৃদ্ধি, পুণ্যতোয়া গঙ্গার দূষণ প্রভূত কমেছে এবং স্বচ্ছ হয়েছে অধিকতর। পঞ্জাবের জলন্ধর থেকে হিমালয়ের চূড়া দৃশ্যমান, আবার উত্তরপ্রদেশের সাহারানপুরের একাধিক বাড়ির ছাদ থেকে হিমালয়ের গঙ্গোত্রী হিমবাহের স্বর্গীয় দৃশ্যের সাক্ষী সেখানকার বাসিন্দারা।³⁷ মানুষ ঘরবন্দি হয়ে থাকার সুবাদে বিভিন্ন প্রাণীরা অবাধে বিচরণ করছে জনবহুল এলাকায়। বেশ কিছু জায়গায় হরিণ, হাতি, বিভিন্ন বিলুপ্তপ্রায় প্রজাতির প্রাণীরা ঘোরাফেরা

করছে। এমনকি বিভিন্ন পরিযায়ী পাখির দল যেখানে সংখ্যায় খুব কম আসতো, সেখানে বিপুল সংখ্যক পরিযায়ী পাখির দল এসে ভিড় জমাচ্ছে। যেমন প্রতি বছরই ফ্লেমিংগো পাখির সমাবেশ ঘটে মুম্বইয়ে, কিন্তু ২০২০ সালে এর সংখ্যা উল্লেখযোগ্য ভাবে বৃদ্ধি পেয়েছে।³⁸ করোনায় মানবজাতি বিপন্ন কিন্তু প্রকৃতি প্রসন্ন।

কাব্যজগতে সৃষ্টিপ্রক্রিয়া এই সময়ে শুরু হয়নি, বরং অন্য আঙ্গিকে সক্রিয় হয়েছে। ‘লক ডাউন ডায়েরি’ গোছের বিভিন্ন অণুগল্প, কবিতা, নাটক, প্রবন্ধের সৃষ্টি হচ্ছে নিত্য নতুন। তবে এদের স্থায়িত্ব বিষয়ে উত্তর দেবে আগামী। প্যাণ্ডোরার বাক্সের শেষ বিষয় আশা নিয়ে আমাদের চলতে হবে। অচিরেই এই অতিমারীর দমন হবে অশ্বিনীদ্বয়সম ভ্যাকসিনের গবেষক, ডাক্তার ও স্বাস্থ্যকর্মীদের দ্বারা। সর্বমঙ্গলাও চণ্ডরূপ ধারণপূর্বক অসুর নিধন করেছিলেন। তাই শ্রী শ্রী চণ্ডী অনুসারে জগন্মাতার কাছে প্রার্থনা –

রোগানশেষানপহংসি তুষ্টি রুপ্তা তু কামান্
সকলানভীষ্টান্।

ত্বামাশ্রিতানাং ন বিপন্নরাণাং ত্বামাশ্রিতা হ্যশ্রয়তাং প্র
যান্তি।।

(শ্রী শ্রী চণ্ডী, ১১/২৯)

হে দেবী! আপনি সম্ভুষ্ট হলে সকল প্রকার (দৈহিক ও মানসিক) রোগ বিনাশ করেন। আবার রুপ্তা (অসম্ভুষ্টা) হলে অভীষ্ট (কাম্য) বস্তুসমূহ নাশ করেন। আপনার আশ্রিত ব্যক্তিদের বিপদ স্থায়ী হয় না। যাঁরা আপনার চরণাশ্রিত, তাঁরা অন্যেরও আশ্রয়যোগ্য হন।

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