

The COVID-19 Outbreak's Multiple Effects

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Abstract:- Currently, the globe is facing extremely dark days that humanity doesn't saw since the Spanish Influenza of 1918-1920. This villain virus named COVID-19 which is traveling and spreading extremely fast worldwide is imposing new rules on our life, our relations and our activities. Humanity should make new reflections on our existentialism, our position in universe, our activities, and our relation with nature and with beings. Hence, we attempt to study this phenomenon under different aspects: health, economic, environmental, sociological and psychological.

Keywords:- *Outbreak; SARS-COV-2; Environmental effect; Economic effect, Psychological effect; World after pandemic*

SCIENCE FOR SOCIETY

The planet earth that is our spaceship, with which we travel forever in space, is not a legacy in the form of private property that we obtained from our ancestors. But, something we must keep, watch out for in order to pass it on to future generations in the best conditions. These are the conditions that have made this planet the only one that is livable; a wonderfully balanced atmosphere by its oxygen and nitrogen composition, a mild temperature not exceeding zero degrees Celsius under normal conditions, the abundant presence of both fresh water and salt water in the seas and oceans and a fantastic biodiversity of flora and fauna. However, much has changed with the discovery of oil and the industrial revolution that the world had experienced from the end of the 19th century. Indeed, anthropogenic activities of all kinds, the mad race behind productivity using machines of different types and powers, the use of pesticides and insecticides to combat any natural agent that could be the basis of a drop in production and especially the excessive use of fossil fuels such as oil, gas and coal had the effect of increasing pollution levels to levels never seen before. For example, the concentration of carbon dioxide CO₂ has exceeded the level of 380 particles/million. And, we pick the consequences today by global warming, the fusion of icy ice caps in south and north poles and on the tops of the mountain ranges. Worse still, according to some modeled scenarios and numerical calculations, shorelines, coastal cities or even islands will be wiped off the maps. Let's not talk about the effects of aerosol gases and particles on the atmosphere such as the attack of the ozone layer by CFCs (fortunately forbidding use for quite some time) and nitrogen oxides that the guidelines imposing green cars since 2008 have limited their effects. However, perhaps the most dangerous of all that is being done is human intervention to change the genetic structures of living beings both microscopic and macroscopic. The ambition of the researchers is good, but with red lines not to cross. This is called consciousness that controls science. Fortunately, cloning was not applied to

humans, for example. Nevertheless, the race of the great powers behind the possession of unconventional weapons; chemical, nuclear biological, can take us to an apocalypse that marks our extermination and even the extermination of any sign of life on this planet Earth.

It is hoped that with this pandemic of COVID-19, which has awakened us to our weakness and inability to cope with these corona viruses, whose size is no more than a few dozen nanometers, that there will be a certain awakening of consciousness everywhere from the simple gentleman everyone, the researcher in the laboratory, the capitalist and the political decision-maker. Taken in the same ship (Earth) either we all find the way of salvation, or we will be exterminated forever.

1. INTRODUCTION

The calamity which is breaking our life today had begun in one of the most crowded provinces in China (Hubei) and more precisely in Wuhan town counting a population of about 14 million. Indeed, an outbreak of unknown source attacking the respiratory system has been rapidly spread between habitants [1]. First, the problem was attributed to seafood Market products and to some forest game, but rapidly by January 7, 2020 a novel stump of coronavirus family (SARS-CoV-2) leading to COVID-19 illness was identified and confirmed by Chinese health authorities [2], and then communicated to rest of world via the WHO Direction-General on January 30 2020 [3]. What aggravated the situation was that the activation of the outbreak coincides with the spring festival travel and the novel China's year during which the traffic of travels increases suddenly and enormously for family's visits. This explains the sharp growth of number of persons touched by the virus. Indeed, of mid-February statistics provide 50,000 cases detected in China in about 34 provinces during only one month. 1600 contaminated cases have died. As of end-March, the globally number reaches 693,224 confirmed cases with about 58, 411 new cases, and 33,106 deaths with 3215 new cases [4]. Today (3 April 2020), about 207 countries are stroked by the pandemic with more than 1 million of positive depicted persons of whom about 53,403 have died [5]. At the beginning the origin of the COVID-19 was attributed to zoonotic event and more precisely to wild consumed vertebrates in the seafood market including snakes and pangolins [6-9]. Later, a virological study proves a relationship between SARS-COV-2 and bats via the RNA sequence of virus' genetic, amino acid sequencing of the capsid proteins and fatty acid composing the lipid envelope of COVID-19 [9, 10]. From a day to another we know better on the virus thanks to deployed efforts by specialists of many laboratories worldwide. Indeed, it is found that the rate of transmission RT is the greatest never

known before. It is much higher than that of SARS, MERS, Ebola, Spanish Influenza and seasonal Influenza [11]. Also, it was reported that the rate of disease transmission from a person with symptomatic infection depends on location and infection control interventions. [11]. Indeed, according to the WHO-China report, this rate of transmission of secondary COVID-19 ranges from 1 to 5 percent among tens of thousands of narrow contacts of confirmed patients in china [12]. In USA, the symptomatic secondary contamination rate was estimated to 0.45 percent (with 95% confidence interval) on the basis of 445 close contacts related to 10 COVID-19 + patients [13]. In the same study, it was reported that the rate of symptomatic secondary attack reached 10.5% with a CI of 95% among household members [13]. In addition, and more precisely in Singapore a study including 157 locally acquired COVID-19 + cases was carried out. It was revealed that the transmission rate during the incubation period reached 6.4% when the exposures occurred one to three days prior to symptom development [14]. However, fear against this tragic outbreak can come if SARS-CoV-2 would present mutation in function of time from a patient to another and when travelling from a continent to another. Indeed, according to Zhou et al. [15] the SARS-CoV-2 shared 79.5% sequence similarity with SARS-CoV. Also, it was proven that SARS-CoV-2 penetrates the hosting cell using angiotensin converting enzyme 2 which is the same as SARS-CoV. Moreover, Zhu et al. [16] isolated the virus SARS-Cov-2 and described its specific cytopathic effects and morphology. They affirmed that SARS-Cov-2 is probably the seventh member of coronavirus's family infecting humans. It is growing in primary airway epithelial cells than in standard tissue-culture cells [16]. However, the outbreak could reach a very dangerous level if SARS-Cov-2 could use other enzymes for entering our cells, because in this case our Immunity, which is a complex of body responses against all sorts of pathogens (i.e. viruses, bacteria, fungi, protozoa...), will be inefficient to build a strategy of specific defense mechanisms such as action of lymphocytes and the production of specific antibodies.

Being convinced of the gravity of such outbreak threatening our existence, it will be useful to trace a road map which can help us to continue our live with its different aspects. In this sense, it will be interesting to discover the advantages due to this outbreak in this critical period. Indeed, COVID-19 pandemic doesn't affect only our health, but also our environment, the countries' economies, the dynamic of our societies, the persons' psychology, and enhancement of new philosophical questions. It provides an excellent opportunity to improve our knowledge in multi-fields such as biology, epidemiology, chemistry, medicine...

2. ARE THERE ANY BENEFITS FROM THE OUTBREAK?

No one can deny the negative effects of this pandemic on the global economy and on the economies of all countries regardless of their levels of development. This can be explained by two behaviours: First, the propagation of the virus should be minimized by the confinement and

especially by the social distancing which immediately lead to the shutdown of financial markets, corporate offices, business and events. Second, the dramatically rate at which the virus was spreading, and the uncertainty with which navigate deciders in majority of countries because of how bad the situation could be, led humans to safety in consumption and investment among consumers, investors and international trade partners [17, 18]. More precisely for small countries (like Tunisia), pillars sectors of its economy such as tourism, automotive accessories and textile/confection industry, which each time significantly restore the imbalance of its economical balance, were found in an almost absolute state of shutdown. This situation yields to an immediate rise in the unemployment rate. However, this part of negative balance sheet shouldn't hide a positive one. Beginning by environmental concern, specialists are speaking about the improvement of the Earth's atmosphere by significantly reducing the level of pollution caused by pollutant gaseous, greenhouse gases and aerosols. For example, specialists are talking mainly about the recovery of the ozone layer. Obviously, the slowdown in anthropogenic and especially industrial activities will lead to a decrease of the resources consumption and in the release of gases that attack the ozone layer (mainly CFC chlorofluorocarbons and nitrogen oxides NO_x). As a result, an increase in thickness and the closure of the ozone hole over the Antarctic is expected, resulting in a significant decrease in UV radiation harmful to any form of biological life [19-21]. However, we shouldn't deny the frustration, stress and fear that pervade people during confinement imposed by the authorities in the face of epidemic and especially the feeling of not being able to control the situation we are experiencing [22]. Besides, what aggravates the situation is the fact that authorities have the clumsiness to communicate only negative sides by listing the numbers of sick and deaths without evocating the number of cured of this disease. Otherwise, to consider the bright side and leaving the black spiral of pessimism, harmful emotions, and making sure to adopt the positive of the situation by implementing the internal force and energy that we have in ourselves when exploiting them as a source of well-being. This allows us to find ourselves in top shape for a new and success start after the outbreak. In this particular period of confinement one can have a golden opportunity to renew friendships or family ties or even strengthen them. We mustn't forget that, in the last decades, we have more and more a semblance of a family, rather than a real family. Everybody is complaining about working hard and trying to earn sufficient money to survive, to run out of time to communicate with their children. Also, one often blames the partner by a lack of understanding, indifference...which usually leads to free disputes which explains the high increase of the divorces rate. Consequently, families will have the opportunity to discover themselves again since they are forced to live in the same confined space for long periods of time. Despite that there will appear misunderstandings sometimes between couples and/or children, like the model of collisions between physical particles in a closed volume and under pressure. But, every

time there will be turns to a state of equilibrium and the final balance can only be positive at the end. Indeed, the relationships between parents and children and between brothers will evolve in the right direction by discovering their qualities and thanks to the solidarity they are obliged to adopt in order to succeed together. In addition, this period of stay home offers a lot of time for many persons to achieve projects in a stand by state such as reading any kind of culture work, do the necessary gardening or maintenance and DIY work at home. Also, an opportunity to do distance learning on the internet of all kinds such as cooking, languages, sciences, distractions like sports, dance, music, fishing and hunting etc. Nevertheless, advantages are not only limited to individuals, but for businesses and public institutions. It can be an opportunity to rethink the benefits of telecommuting and implement future innovative strategies in several areas (public services, education, and distance training ...). Moreover, some persons have gone so far as to say that this pandemic will change people's behaviour, in a good way. As they show more interest in their lifestyle in all its forms (physical, hygiene, food...). But, we should be careful of not to switch to obsessive and sick behaviours. In addition, this period was also an opportunity for some to exhibit their knowledge and creativity, as was the case with Tunisian technicians and engineers who gave free rein to produce what is needed to manage this crisis, like protective equipment for caregivers, many robots for alerting people to stay home and for rooms disinfection in hospitals and all sorts of buildings, and ventilation equipment for patients.

3. WILL THERE BE A DIFFERENT WORLD AFTER COVID-19 PANDEMIC?

First of all, one hopes that this outbreak will be ended as soon as possible by finding an efficient vaccine. Moreover, one hopes that this virus would not have a certain "intelligence" allowing it to mutate continuously so that our immunity system would be powerless to produce antibodies once and for all in the face of another wave of such a pandemic. This fear comes after last Professor Luc Montagnier (awarded Nobel price of Medicine) declaration saying that there is a big probability that SARS-COV-2 was genetically manipulated in high sophisticated laboratory of Wuhan in China, and researchers in this institution were focusing in finding a VIH's vaccine by adding ARN sequences of VIH inside SARS-COV virus. In this case all history given by the Chinese authority concerning the sea market and bats and pangolin consumption will be a play with a very bad staging. Faced with this jam of information, most of which are intoxes, we can only wait until the next few days to know who is right and who is wrong. However, the big question is: does the COVID-19 outbreak influences our life? And the world after COVID-19 will it be similar to the world before?

On political scale, this outbreak has shown the limits of neo-liberalism on economic, health and social policies. Indeed, after the proliferation of this doctrine stated by Milton Friedman and Friedrich Hayek (since 1970) [23, 24] countries worldwide have chosen the market economy and stopped what we called providence state. Hence, budgets

allowed to education, health and transport sectors decreased enormously against expense of military and other expenses, giving the manoeuvring wheel to the giant multinationals becoming even more powerful than the states. Consequently, even the number one country which is USA find itself powerless faced with this pandemic. That is why majority of countries will think differently after this outbreak in order to improve their educational, health, transport and social policies. Indeed, the real armies we have taken refuge in today are white gown wearers, law enforcement, public transport workers, those working in agri-food and cleaning and disinfection products, not to mention innovative engineers of certain products and processes.

A most important question that will soon be asked of us, when this epidemic surge is behind us, will focus on the status of man in the world and this in view of the fact that he is both an essential being and an essential agent in relation to other beings in the Universe. Man should surely question the excessive, if not wild, consumption of non-renewable fossil fuels. Moreover, it should be aware of multiple origins of pollution resulting from our wild industrial activity which are causing brutal climate change leading to probable apocalyptic scenarios. Finally, last but not least, we will look at our priorities in scientific research in order to direct it for the better, towards what is useful and for Man and for environment, because we must realize that microscopic beings such as bacteria and viruses, will also develop, and this in proportion to the progress that are ours in the various scientific and technological fields. However, it is likely that this fact will be nothing more than a manifestation among others of Nature's reaction in response to what we have inflicted on it as abuses. Hence, from this experience of COVID-19 outbreak, it is clear that we will soon face microscopic beings (bacteria, microbes and viruses) that have evolved so much over time so that our sciences will find themselves powerless as it is the case these days. Who knows if this would not be a way of revolving nature against all the evils that we have not stopped causing it for quite some time?

Finally, in order to comprehend more our existentialism, can we agree with some like J. Collin? The latter defends a model of quantum world based on atom and emptiness, and on a new vision that one must have towards water: "we are infinity in motion evolving in the eternity of time" [25].

4. CONCLUSIONS

Currently, the number of contaminated subjects is approaching 2 million, 700 thousand and the number of deaths is not far from 200 thousand. A real disaster and it's not over yet. Human life is turned upside down in all its aspects with this latest generation of war against the microscopic. However, human intelligence should always win. Indeed, a great scientific momentum is expected in all fields and that of molecular biology. An alternation of neoliberalism showing its limits towards moderate socialist regimes in which public sectors and services should gain more importance in the policies of countries. A socio-psychological and above all philosophical renaissance

should emerge so that Man regains his humanism and wins ethically. More precisely, the family is expected to rebuild itself again after the tear it had experienced for more than half a century. Also, our benevolence about the environment and its various constituents should occupy an important place in the life of the 21st century. Moreover, researchers of different disciplines should work harder in the domain of physics to find disinfection processes using specific UV wavelength radiation. Engineers should investigate intelligent textile materials killing directly the virus for all consumers and especially for medical corps. Nutritionists should think on some alimentation regimes such that of Mediterranean based on olive oil, cereals, fish and provincial herbs.

CONFLICTS OF INTERESTS

There are no conflicts of interest.

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