PANDEMIC CRISIS MANAGEMENT: THREATS AND OPPORTUNITIES FOR HUMANS AND PLANET EARTH

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ABSTRACT

The first recorded COVID-19 case emerged in China and, within a few months, it has spread to 210 countries globally, thrusting people into danger, uncertainty, fear, and of course physical and social isolation. The impacts of this pandemic are significant for every aspect of our lives. Crises include risk and chances at the same time. As Shakespeare said, "There is nothing either good or bad, but thinking makes it so". This paper focuses on threats and opportunities of the pandemic crisis for humans and planet Earth.

Crisis is defined as an unplanned and unwanted process of limited duration and impact, which endangers primary goals, and produces ambivalent outcome. Crisis management encompasses three phases: avoiding the crisis, identifying its symptoms when they occur and finding ways out of the crisis. There are several research questions related to that. First, could the COVID-19 crisis be avoided? Or at least could its onset be recognized early? Second, how can the pandemic crisis be measured in terms of its intensity and depth? Third, which ways lead us out of the crisis? And fourth, which lessons have to be learned? Exploring the novel literature and research findings provides new insights into the pandemic crisis and the crisis management process, which is the aim of the paper. With its results and major conclusions this paper provides a holistic perspective to the pandemic crisis and crisis management.

Keywords: *COVID-19, crisis, crisis management, early warning, chances, sustainability*

INTRODUCTION

Asking the right questions seems more important than offering answers. However, "...scientific research is never ending in its quest for knowledge, rather than trying to reach once-for-all final conclusions" [1]. We are facing a global crisis manifesting as a pandemic. In December 2019, a new pneumonia case emerged in Wuhan, China. COVID-19 is a very infectious disease caused by a recently identified corona virus. It led to a large number of victims, directly or indirectly. Social and political response to the spread of the corona virus could also be seen as a result of fundamental cultural uncertainty [2].

Crises are generally not welcomed; they force us to think about who we are, what we really want and where we are headed. These questions seem simple, but the answers do not seem that simple. We live in a time when only uncertainty is certain. The environment is characterized by high complexity and high dynamics. The crisis is a transient difficult period, a process of conflict between the old and the new. It has a negative connotation as it is accompanied by unpleasant changes. However, the crisis is a preparation for the realization of the new; it shows when and where profound changes need to be made. Crisis is a period of change, of transformation and transition.

Crises, as unpleasant as they are, are welcome too. They stimulate internal and external growth, forcing us to leave the comfort zone and enter the unknown. A new quality is born in a crisis; what a caterpillar calls its death, for the butterfly is a birth. The period in between is crisis: the living being is not a caterpillar anymore, but still not the butterfly either. So, the crisis is a normal and welcome phase of evolution. Every crisis includes risk and chances. In times of crises there is a flood of information about threats. What about opportunities?

The aim of the paper is to discover the threats and opportunities for humans and planet Earth caused by the crisis of the COVID-19 pandemic. The main research questions are: Could the pandemic crisis be avoided? How could the symptoms of the crisis be measured? Which are the ways out of the crisis? What has to be learned from the pandemic crisis management? Literature research and current statistics provide a deeper insight into the questions asked and offer an integrative view.

CRISIS AND CRISIS MANAGEMENT

The pandemic crisis has affected humans around the world. People have been in quarantine and/or isolation for weeks, excluded from most of their family and friends. If possible, they work online but in worse scenarios, they have lost their jobs because many businesses closed.

Crisis is understood to mean an aggravated emergency when the existence is at risk [3]. The terms "crisis" and "disaster" are often used synonymously. Both deal with events that belong in the "un-ness" category: unexpected, undesirable, unimaginable, and often unmanageable situations [4]. In both Chinese and Greek, the term crisis refers to a critical point, a fork in the road of development: the word "crisis" implies threat, but also opportunity. Crises occur when core values or life-sustaining systems come under threat [4]. The crisis is the final intensification of a development.

Crisis can be understood as dynamic processes of vital existential threat to systems that represent a limited controllable and configurable system development [5]. In everyday language, crisis signifies a difficult situation, and the crisis period is mainly a time of transformation, climax or reversal of dangerous development. Crisis is an "...unplanned and unwanted process of limited duration and impact, detrimental to primary goals, with ambivalent outcome" [6]. Crises lead to a new orientation, a decisive change, to drawing conclusions and consequences that lead to a change in past behaviour, until a rethinking of past goals [7]. From an evolutionary standpoint, Kuhn [8] defines a crisis as preparing the way for a novelty to emerge, as it shows us when and where profound changes need to be made. Crisis can lead to perceptual transformation, to a paradigm shift.

The term "tipping point" commonly refers to a critical threshold at which a tiny perturbation can qualitatively alter the state or development of a system. Examples that have received recent attention include the potential collapse of the Atlantic thermohaline circulation (THC), dieback of the Amazon rainforest, and decay of the Greenland ice sheet. Such phenomena have been described as "tipping points" following the popular notion that, at a

particular moment in time, a small change can have large, long-term consequences for a system, i.e., "little things can make a big difference". The tipping point is the corresponding critical point - in forcing and a feature of the system - at which the future state of the system is qualitatively altered [9].

Crises are the result of multiple causes, which interact over time to produce threats with devastating potential [4]. Each crisis is characterized by multidimensional aspects, and typology enables the analysis of individual dimensions and their deep understanding [7]. The eternal question is "where do the negative incentives come from, where are the sources of the crisis?" Exploring the causes of the crisis allows differentiation into quantitative and qualitative, as well as external and internal [10]. A crisis is never caused by a single occurrence, there is never a single source and cause, and it is always a combination of different sources and causes. But, in essence, the cause of crisis lies in the reduced vitality of the system, which is manifested in the difficulty of accepting change and finding constructive responses to challenges [7].

Consequences of a crisis are most commonly defined as relief from a complicated situation; they can be seen as both destructive and constructive. Destructive consequences are obvious. If the crisis is seen as a chance for a positive turn, if the constructive aspect of the crisis is taken into account, then its constructive consequences and opportunities are discussed. A crisis situation can unleash additional strengths and enhance the willingness of ossified structures to change, initiate innovations, stimulate the awakening of creative potentials so that future challenges are more readily met [7].

Crisis management is defined as an activity aimed at managing a dangerous situation and planning and implementing measures to secure the basic goals. It includes three questions: first, how to avoid a crisis, second, how to measure it when it occurs, and third, how to get out from the crisis [7]. Crises and disasters create difficulties; thus crisis management is

an increasingly important activity. It prepares for a possible crisis, increasing sensitivity for weak signals. It helps to recognize symptoms of crisis when they occur and shows possible ways out of the crisis. In times of crisis, new creative solutions, new innovative and inventive answers to old questions are waiting to be discovered and developed. The following sections allow deeper insight into pandemic crisis management.

AVOIDING THE CRISIS: EARLY WARNING SIGNALS

Edward Lorenz, a meteorologist and a professor at MIT, the father of chaos theory and butterfly effect, formulated what became known as the butterfly effect - a term that grew out of an academic paper he presented in 1972 entitled: "Predictability: Does the Flap of a Butterfly's Wings in Brazil Set Off a Tornado in Texas?" The butterfly effect is a concept which highlights the possibility that small causes may have momentous effects. It became a metaphor used in very diverse contexts [11]. Chaos theory presented by Lorenz [12] has many implications, from weather prediction to philosophy, as well as considerable impacts on emerging scientific fields. "With enough data points, certain disorders will cause an emerging situation to be flagged, first as noteworthy, something that needs to be monitored, and something that may eventually be upgraded to a dangerous condition." Everything is about building awareness, and using this added awareness to halt something negative from happening [13]. These red flags are called weak signals or early warning. The "butterfly effect" is no longer a merely theoretical discussion. These changes have required response to switch from single agent comprehension and management to holistic approaches and policies [14].

With increasing turbulence, meaning complexity and dynamics, more and more time is required for an effective reaction, while, at the same time, the available time for such a reaction is shorter, i.e. the decision-making

process is increasingly under intense time pressure. In order to reduce the gap between the time needed and the time available for an effective response, there is a need for a representative way of thinking and acting and early warning indicators as an instrument of such an approach [7]. The crucial importance of timely cognition is conveyed by the words of Lao Tzu: "Deal with difficult tasks while they are easy. Act on large issues while they are small."

The concept of early (weak) signals is based on the assumption that discontinuities in the technological, economic, social, political, and natural environment do not occur by chance or unforeseen, but are announced through weak signals, since such discontinuities are driven by people and their interests. The task of the early warning system is to show the possible dangers and opportunities (which do not yet exist or have not yet occurred) at an earliest stage The task of early warning is also to determine the threshold for tolerance, to understand the exceedance of values that are tolerated, as well as to analyse the possible causes and effects [7]. The primary purpose of the early warning and early cognition indicators is to prevent surprises that are often associated with high losses and missed chances, to gain in time because timely cognition and acceptance of future change opens up enough time for future change and reorientation, an increase in creative skills and activities to limit and avoid danger, or to take advantage of opportunities [15]. Early hint, early cognition and early warning are three stages in terms of content [6]. Early warning is the third stage in which crisis indicators are defined for potential crisis areas, as well as their relative level of tolerance. If periodic measurement shows that tolerance limits are exceeded, then this is a problem that, based on the interdependencies analysed and forecasted, may lead to a crisis at some point in time [7].

Threatening situations have a past when various weak or strong signals indicate an impending crisis. Strategic radar is the third generation of early warning, coming after time comparison of indicators as the first generation and specific early warning indicators based on individual occurrences/developments as the second generation. While the first two generations of early warning systems deal almost exclusively with financial target sizes, third generation has at its centre silent signals, qualitative information on possible, impending occurrences [16]. An early warning signal reflects and assesses vulnerability of a system. Crisis prevention is a necessary and indeed vitally important strategy [17]. The prerequisite for an early warning system is a comprehensive awareness of possible crises, their sources, intensity and the consequences. This is crisis prevention [18]. The crisis has two basic characteristics: first, signs of crisis occur very early, and second, no one sees the signs. Were there early warning signals of a pandemic crisis?

On May 9, 2012, the Club of Rome, a non-profit organization created to address the multiple crises facing humanity, launched a new Report to the Club of Rome, entitled "2052 - A Global Forecast for the Next Forty Years". In launching this Report, the Club of Rome continued its tradition of raising fundamental questions about the challenges facing humankind in a systemic, holistic and long-term manner. This Report revisited issues first raised 40 years ago in "Limits to Growth", a report that created shock waves when it was published. Rapid change does not happen until people's patience caused by the negative consequences of "business-as-usual" (climate change effects, inequity, resource depletion) runs out. Society's main institutions: democracy and economy are based on short-termism, resulting in a slow societal response to challenges, which need long-term solutions and investments [19].

"Limits to Growth" addressed an important question: Is the world in overshoot and if yes, will the landing be soft or will it be hard? Randers clearly believes that humanity is in overshoot and that the landing will not be soft, but less hard than feared. The process of adapting humanity to the planet's limitations may be too slow to stop planetary decline. Currently, the human demand on the biosphere

exceeds the global bio-capacity by some 40 %. Today's cataclysmic climatic effects demonstrate that regardless of modern society's many achievements, we could be on a path of un-managed decline. We have the opportunity to fundamentally change our ways, but it seems that rather than controlling our destiny, we are merely drifting into our future. Will the belief in endless growth crumble [19]?

"Nature's goods and services are the ultimate foundation of life and health, even though in modern societies this fundamental dependency may be indirect, displaced in space and time, and therefore poorly recognized" [20]. Back to the pandemic crisis: What are the potential crisis areas? What are the weak/strong indicators of the crisis? Where are the limits of tolerance? Among numerous potential crisis areas, this paper focuses on humanity and planet Earth.

There are many early warning signals on the level of humans. Today, 55 % of the world's population lives in urban areas [21]. Projections show that urbanization, gradual shift in residence of the human population from rural to urban areas will be close to 90 % by 2050. Living in the city mostly means living close to a strongly developed industry and transport networks. This in turn means living in the polluted environment with air, water, light, noise, electromagnetic and other types of pollution and poor or no contact with nature. High air pollution favours the development of various diseases, especially pulmonary and viral. In addition, the dominant principle of "faster, stronger, more" as a currently dominant life model generates pressure and related diseases. Multitasking is highly valued, greed for more material goods and experiences has no end. The dominant human value system is at stake.

On the level of the planet, there is climate change with unexpected droughts and floods, glacial meltdowns, decrease and loss in biodiversity, destruction of nature, natural resources and animal habitats. Climate, economic and political reasons cause

migrations of population, and all kinds of pollution. Early warnings of limits of growth have been ignored. Planet Earth has its own limits; unlimited growth of production/consumption/waste in a limited environment is not possible. Unlimited growth is similar to cancerous growth, it causes unwanted impacts. The business area is especially emphasized. What is needed on the planetary level is balance between growth-stagnation-death, the principle that can be seen in nature.

Early warning is an instrument of anticipatory crisis management, i.e. its anticipation and avoidance. Non-use or inappropriate use of these instruments diminishes the possibility of preventive action, resulting in a crisis. If a dangerous development has not been/could not be avoided, if a crisis has occurred, it is important to identify its quantitative and qualitative characteristics, which is the next stage of the crisis management process, i.e. its identification [7].

CRISIS DIAGNOSIS AND SYMPTOMS

If crises cannot be prevented, they must be recognized in time. Early warning can work only if it builds on a solid theory of crisis development [4]. Every crisis is a transformation, something is going to die and something is going to be born: on a physical, mental, emotional or spiritual level, or even better, integrative on all levels. With early warning indicators, crisis development could be identified at the earliest stage and, if possible, prevented. Sometimes a crisis cannot be avoided. If a crisis occurs, two questions are important: 1) Are we in a crisis?, 2) If yes, which is its intensity [7]? Once a crisis becomes manifest, crisis managers must take measures to deal with its consequences [4].

The definition of a crisis determines its symptoms. Every crisis - political, economic, business, social, health, environmental etc., strategic or operational - has its symptoms. As emphasized, a crisis is an unplanned and

unwanted process of limited duration and impact, detrimental to primary goals, with ambivalent outcome. The symptoms of the crisis thus arise from the fundamental goals and objectives. People and planet Earth are the focus of this paper. So, what are the essential goals of humans and planet Earth? Which symptoms could reflect their crisis? How is the crisis manifested?

It may be said that for most humans, the ultimate goal is the achievement of well-being and security for themselves and their loved ones. More specifically, it could be assumed that essential needs of humans are love, food, safety and challenges/support for development. Maslow's theory of motivation [22] suggests that there are five classes of needs and that they are hierarchically organized. Physiological needs are at the bottom of the hierarchy followed by security, belongingness, esteem, and self-actualization needs. Each level is a precondition for the next higher level [22]. So, without satisfying the physiological needs, which means the need for air, water, and food, the next level of needs cannot be realized.

Numbers, as shown in Table 1, are facts that speak for themselves. The coronavirus COVID-19 is affecting people in 210 countries and territories around the world [23]. At the same time, the number of hungry people worldwide increased for a third consecutive year and now exceeds 820 million [24 - 26]. These quiet deaths and silent suffering do not seize the world's attention like the coronavirus. But they should. World hunger is on the rise; yet, an estimated 1/3 of all food produced globally is lost or goes to waste [24] and 25 % of the world's fresh water supply is used to grow food that is never eaten [27].

The Ecological Footprint is the only metric that measures how much nature we have and how much nature we use; it measures the demand on nature and supply of nature. The Footprint helps to improve sustainability and well-being in countries, optimize public project investments for local leaders and understand their impact on the planet for

individuals [28]. The Ecological Footprint tracks the use of six categories of productive surface areas: cropland, grazing land, fishing grounds, built-up land, forest area, and carbon demand on land. Conceived in 1990 by Mathis Wackernagel and William Rees at the University of British Columbia, the Ecological Footprint launched the broader Footprint movement, including the Carbon Footprint, and is now widely used by scientists, businesses, governments, individuals, and institutions working to monitor ecological resource use and advance sustainable development. Ecological footprint can be used as a symptom of crisis on the individual, city, country or world level.

Table 1. Selected world crisis symptoms (on 9th May 2020) [23, 26]

Food	Number of people
- Undernourished people in the world	842,868,765
- Overweight people in the world	1,692,961,517
- Obese people in the world	756,238,534
- People who died of hunger *this year*	3,190,646
- Tons of food lost or wasted *this year*	460,875,465
Water	
- Deaths caused by water-related diseases *this year*	298,479
- People with no access to a safe drinking water source	801,288,824
Health	
- Communicable disease deaths *this year*	4,601320
- *Deaths of children under 5 this year*	2,694,262
Corona virus	
- Cases *this year*	4,027,110
- Corona virus deaths *this year*	276,386
- Corona virus recovered *this year*	1,393,423
- Corona virus active cases	2,357,301

The world's ecological deficit is referred to as global ecological overshoot**.** Since the 1970s, humanity has been in ecological overshoot, with annual demand on resources exceeding what Earth can regenerate each year. Today humanity uses the equivalent of 1.75 Earths to provide the resources we use and absorb our

waste. This means it now takes the Earth one year and eight months to regenerate what we use in a year. We use more ecological resources and services than nature can regenerate through overfishing, overharvesting forests, and emitting more carbon dioxide into the atmosphere than forests can sequester [29].

Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year. In 2019, Earth Overshoot Day fell on July 29, the earliest ever. Earth Overshoot Day marks the date when humanity has exhausted nature's budget for the year. For the rest of the year, humans are maintaining ecological deficit by drawing down local resource stocks and accumulating carbon dioxide in the atmosphere. Humans are operating in overshoot. Overshoot is possible because humans are depleting planet's natural capital - which compromises humanity's future resource security. The costs of this global ecological overspending are becoming increasingly evident in the forms of deforestation, soil erosion, biodiversity reduction and loss, and the build-up of carbon dioxide in the atmosphere. Humanity will eventually have to operate within the means of Earth's ecological resources, whether that balance is restored by disaster or by design [30]. Humanity's efforts to contain the coronavirus pandemic, and the resulting economic slowdown, have reduced the global Carbon Footprint and significantly changed resource consumption. However, this is a far cry from the intentional changes we strive for [29]. Ecosystems are the planet's life-support systems - for the human species and all other forms of life [20]. Our planet Earth simply cannot bear unlimited production, consumption and waste.

Zoological Society of London emphasises that humans have wiped out 60 % of animals since 1970. Humans are just 0.01 % of all life but have destroyed 6 of every 10 animals. At least 50 million of rainforests are lost every year, totalling an area the size of England, Wales and Scotland combined [31]. Deforestation destroys the habitats of numerous animals and reduces biodiversity. There is increasing contact between humans and wildlife. Unknown diseases are inevitable. Coronavirus is just one in a series of such occurrences. At the time of writing, the world is in the grips of a global pandemic the like of which has never been seen before. The COVID-19 that has swept through countries and continents has caused untold human suffering, social upheaval, and economic damage. But while the spread of the current crisis is unprecedented, the new coronavirus follows several diseases that have emerged in recent decades, such as Ebola, AIDS, SARS, avian influenza and swine flu. All originated in animals - and there is increasing evidence that humanity's overexploitation of nature is one of the factors behind the spread of new diseases [30]. Changes in land use that bring wildlife, livestock and humans into closer contact with each other facilitate the spread of diseases, including new strains of bacteria and viruses, creating the conditions for the development of old and new zoonoses: infectious diseases that can be transmitted from animals to humans. There is a link between humanity's impacts on ecosystems and biodiversity and the spread of certain diseases [30].

"If you're getting COVID, and you have been breathing polluted air, it's really putting gasoline on a fire," said Francesca Dominici, a Harvard biostatistics professor and senior author of the study how air pollution has intensified the pandemic. That is because the fine particles penetrate deep into the body, promoting hypertension, heart disease, breathing trouble, and diabetes, all of which increase complications in corona virus patients. The particles also weaken the immune system and fuel inflammation in the lungs and respiratory tract, adding to the risk both of getting COVID-19 and of having severe symptoms [32].

The cleaner air is also a reminder of how deadly air pollution is. The World Health Organization says dirty air, both indoors and out, cuts short seven million lives annually worldwide [32]. Hand washing helps stop

COVID-19. But in India, water is scarce. Only a fifth of all households in this nation of 1.3 billion have piped running water. That makes frequent hand washing a challenge [33]. Last year, according to the FAO (Food and Agriculture Organization), five million children worldwide died of hunger (among 162 million who are stunted and 51 million who are wasted). That is 200 times more people than have died so far from COVID-19, yet no government has declared a state of emergency or asked that we radically alter our way of life to save them. Nor do we see a comparable level of alarm and action around suicide - the mere tip of an iceberg of despair and depression - which kills over a million people a year globally and 50,000 in the USA. Or drug overdoses, which kills 70,000 in the USA, the autoimmunity epidemic, which affects 23.5 million to 50 million (AARDA), or obesity, which afflicts well over 100 million [34]. Each of these people has loved ones, family and friends, and every life is worth living. Understanding, compassion and conscience invite us to do what we can to avert an unnecessary tragedy. If we can change so radically for COVID-19, we can do it for these other conditions too. Let us ask: "Why are we able to unify our collective will to stem this virus, but not to address other grave threats to humanity. Why, until now, has society been so frozen in its existing trajectory?" [34].

In modern crises, the situation may hang on one single outlier point, which becomes the swing point. Now humans must confront phenomena outside accepted scales. The problems and difficulties have shifted from the edges, where they could be conveniently forgotten, to the core. For example, insurance mechanisms for covering damage used to work quite adequately. Today, the types of threats that loom mean that the entire paradigm base of insurance policy must be reviewed [14].

GETTING OUT OF THE CRISIS

Once a crisis occurs, the question is how to get out of it. Reactive crisis management is a

restructuring of the future, which can take two directions: rehabilitation/revaluation or end of fundamental variables and main objectives. To get out of a crisis it is important to know the causes that generated the crisis, its symptoms and its strength. Only after thorough analysis and diagnosis can successful therapy follow. Successfully coming out of the crisis means facing the truth and asking the questions: Where are we now? and Which way to go? As Norbert Zimmerman said about business crisis and getting out from it: "You can draw the organization charts and boxes as you like, but unless you can change people's attitudes and if it is not for the work of the heart, the enterprise rebuilding does not start. I believe that was the real recipe for our remediation" [7].

The intensity or scope of a crisis is thus not solely determined by the nature of the threat, the level of uncertainty, or the time available to decision makers. A crisis is to a considerable extent what people - influenced by the inevitable mass media onslaught following an unscheduled event - make of it [4]. In the first three months of 2020, as the COVID-19 pandemic swept around the globe from China, and governments began shutting down businesses (industry) and transportation, satellites detected sharp declines in NO_2 levels compared with the same period in 2019. Satellites recorded significantly less pollution compared to the same period last year in Europe, Asia, and USA [32]. To get healthier air for the longer term, Myllyvirta said, means shifting to clean energy and transportation, "not ordering people to stay at home at drastic economic cost." But the cleaner pandemic skies do show how fast we can bring down pollution when we reduce our burning of fossil fuels [32].

Although a near-halt in normal life and economic activity is no one's idea of a good way to reduce pollution, the brief respite might, in Birkett's view, turn this dark time into "a catalyst, or a tipping point, which could get us to say "Clean air—there's something special about it" (Gardiner, 2020).

From China's Hubei province to industrial northern Italy and beyond, pollution levels have plummeted as lockdowns aimed at slowing the viral spread have shuttered businesses and trapped billions of people at home. In India, where air pollution is among the world's worst, "people are reporting seeing the Himalayas for the first time from where they live," Lauri Myllyvirta, lead analyst at the Helsinki-based Centre for Research on Energy and Clean Air, said in an e-mail [32]. Cleaner air can help "flatten the curve" of the pandemic. Cleaner pandemic skies should also reduce other pressures on hospitals; short-term changes in air quality have an immediate impact on heart attacks, strokes, and emergency room visits. All increase when pollution spikes. Air pollution causes more than 1.2 million annual deaths in China. Indeed, a 2016 study found that China's aggressive measures to clean the air in and around Beijing for the 2008 Olympics had led to a temporary 8 % drop in the overall death rate [32].

Getting out of the pandemic crisis means to recognize and to accept human role and responsibility. Many people think that humans are superior beings. Yes, humans, as a link in the chain of life, are superior, but only in their responsibility to respect life in every life form. Humans have the potential to be aware of consequences of their thoughts, spoken words and acts. If not, the crisis reminds us to recognize it, to bring people back to the truth. Humans are invited to rethink and reset currently dominant values and priorities. And this entire crisis is the product of greed; greed is the dominant value in today's world. And as long as that persists, well, we are done [35]. The short-term view, unlimited growth, profit and material goods as currently dominant values, patterns and goals are not acceptable anymore. Every step of the production and consumption process generates waste. Humans simply have to respect the limits of planet Earth and its inhabitants. Through the crisis people in developed countries are invited to lead a voluntary simple life style, to do single-tasking instead of multi-tasking, to exit the comfort zone, creating new values and new activities, to develop new quality of relationships to themselves, to other people, to all living forms, to planet Earth. What remains in the crisis are people's competences: if we can't go outward, we can go inward. People are invited to develop sustainable ways of producing, consuming and waste creating, without compromising other life forms and next generations.

SOME PANDEMIC CRISIS THREATS AND OPPORTUNITIES

The novel corona virus COVID-19 has provided us not only with losses but also gains [36]. Planet Earth asks humans to rethink priorities and wishes. Crisis is a teacher; it wants to teach the unknown or the unwanted to know. Life principles want to be recognized and respected. On the planetary level, the pandemic crisis reflects all weaknesses of the present mechanistic, mono-dimensional and short-term perspective. Sustainability as a primary life and work principle is strongly needed with a multi-dimensional perspective, coupled with sharing, green, zero-waste and circular economy based on holistic and long-term approaches in all areas. Reducing production, consumption and waste in general, in some areas in particular, and shifting transport according to environmental principles, as heretical as it may sound from an economic perspective, can contribute significantly to the health of planet Earth, of its inhabitants, and thus humans as well.

The sound of silence is around the globe. The corona virus has 'quieted' the world. Planet Earth is on retreat, full of production, consumption, and waste and all related activities. As people stopped commuting and travelling, the Earth's surface vibrated less - and seismologists tracked the change. Since world leaders have urged citizens to stay home and maintain social distancing to slow the corona virus pandemic, the hum of daily life has quieted. The seismic impacts of staying home, noise reductions in numerous places, including cities of Switzerland, Spain, Italy,

the United Kingdom, China, Nepal, the United States, New Zealand, and more. In Brussels, seismic activity since the advent of COVID-19 is about 30 to 50 % lower than average - similar to declines during the Christmas holidays. In Nepal, the seismic plots of some cities show a stunning 80 % drop. "Having a lower level of background noise is just like being in a quieter room," says environmental seismologist Celeste Labedz, a PhD student at the California Institute of Technology. "We can hear more sounds" [37]. As the novel corona virus tears around the world, it's exploiting our biggest weaknesses, from creaking health care systems to extreme social inequality. Its relationship with one pervasive and neglected problem, however, is more tangled: Air pollution has intensified the pandemic, but the pandemic has – temporarily - cleaned the skies [32].

COVID-19 brutally clarified the need for a new vision and a new paradigm. The unthinkable and inconceivable is here to stay. We must address it [14]. A crisis creates a straightforward challenge. The pandemic crisis implies less NO_2, less air and noise pollution, less seismic activities for planet Earth. It impacts life of animals as well: it is reported that dolphins and whales come closer to the coast, fish is seen in the canals of Venice after a long time, and sport hunting is locked down. Global wildlife trade is in the spotlight now as well as different types of human exploitation of animals for all sorts of things. Humanity's relationship to nature is now in focus. Posts about swans returning to Venetian canals and elephants passing out after drinking corn wine in the fields of China were showered with hundreds of thousands of likes, endorsing the idea that the lack of human activity had reversed the course of nature and given animals a break from our disruptive ways [38].

Our invitation is anchored on the need for a paradigm shift in our fundamental belief matrix, and the complex economic, financial, social systems underpinning our daily interactions. A new paradigm is essential to clarify our role as a species within the greater Earth Community. Conversations are needed to agree on core values that promote human dignity, respect for nature and protection of the commons beyond current generations. The emergence of the need for a New Civilization is a manifestation of a rising consciousness of who we are as humans, and what values would best shape our relationships to one another and to nature [39].

Ecosystems are the planet's life-support systems - for the human species and all other forms of life [20]. We have to generate a radical turnaround on a number of fronts. There has to be rupture but in a positive and creative sense [14]. Every cause has an effect. We can make smarter choices in the economy like green, sustainable, zero-waste, circular and sharing economy, in our lifestyle like riding a bike, planting our own garden, buying local fruits and vegetables, preparing and eating healthier food, responsible decision making and much more. After reading an amazing book and watching a movie about the hidden life of trees [40] and knowing that planting trees is the most important thing we can do to contribute to the health of the planet, [21] people can easily get directions to act.

Once the crisis is over, we humans need to ask ourselves what we have learned. If we did not learn anything, the crisis will re-appear in a higher intensity. That is the nature of learning. Today's crisis creates an urgent need for an in-depth reflection on the relationship between human beings and nature, the risks associated with current economic development pathways, and how we can better protect ourselves in the future [30]. The chances of pathogens like viruses passing from wild and domestic animals to humans may be increased by the destruction and modification of natural ecosystems, the illegal or uncontrolled trade of wild species and the unhygienic conditions under which wild and domestic species are mixed and marketed [41].

Crisis is a teacher. It wants to teach us something we did not know or did not want to know. Is business destroying our planet? With primary orientation on profit, profitability and short-term, ignoring social damage to labour,

human rights, product responsibility, local community and causing environmental damage through energy, water, air, soil, biodiversity, effluents, emissions, etc. it seems that, yes, business does have a negative influence on people and the planet. Social and environmental/cost of profitability is higher and higher. More and more authors and thinkers advocate humility, modesty, charity, trust, soul and spirit in business. We have seen that economies of soul are based on the reaffirmation of everlasting values. It seems that the biggest responsibility for that situation lies in international companies which are bigger and mightier than numerous national economies, so that they are the first ones to take adequate greater responsibility for our planet [42]. Business, yes, but integrative, holistic and sustainable. What is needed is a paradigm shift, a holistic and integrative long-term approach, redefining the place of humans in the life chain. Thinking outside the box is now preferred because it allows crossing mental boundaries, and thinking in colour, rather than in black and white.

A crisis offers a reservoir of potential lessons for contingency planning and training for future crises [4]. There is no doubt the pandemic-driven clearing of the air will be short-lived, with emissions sure to return to, if not surpass, their usual levels whenever factories start up again and people get back in their cars. That is a danger elsewhere too. When the pandemic finally abates, polluting industries may well seek to make up for lost time with even higher production, said François Gemenne, a political scientist and environmental researcher at the University of Liège, Belgium [32]. But, we had the experience of clear air. And we know how to reach it again, without the help from the virus.

Our Planet could be seen as our billion-star hotel; we are called to behave properly as well-educated guests, we come and go and, as responsible guests, we have to respect and care about our hotel and leave it in the best condition for future visitors. There is the well-known 7th Generation Principle based on an ancient Iroquois philosophy that: "In our every

deliberation, we must consider the impact of our decisions on the next seven generations" [43].

Because of quarantine, people are forced to stay home, like in our temporary golden cage so to speak. Just like animals in numerous zoos, except that for them, this is for life. There are a drawing depicting people in cages, and animals and plants enjoying their freedom around the cage. This reflects the current situation on our planet Earth. COVID-19 is showing us that when humanity is united in a common cause, phenomenally rapid change is possible. COVID-19 demonstrates the power of our collective will when we agree on what is important. What else might we achieve, in coherency? What do we want to achieve, and what world shall we create? That is always the next question when anyone awakens to their power [34].

In numerous countries, the pandemic crisis means closing businesses, unemployment and collapse of modern society in many ways. On an individual level, that means social anxiety worldwide, domestic violence, and depression. The frequency of conflicts has increased in around a quarter of families [44]. There are huge challenges for kids, students, and seniors. The coronavirus outbreak reveals our vulnerable society. Because of the sensitivity and profound fears triggered by the issue, any attempt at risk management must satisfy two fundamental requirements. First, there is a need for honest and focused open-mindedness. Second, there is a need for courage. However, optimism cannot be founded on blindness, evasion, and defection. Optimism demands open and questioning minds, personal involvement, and a determined spirit of initiative [14].

Opportunities are found in increased solidarity and stronger focus on common good, and strengthening of the common sense. Traditional local community solutions and benefits are obvious again, like "zero kilometre" as a symbol for buying fruits and vegetables from the close environment. People change as well. The latest research shows that

after the coronavirus experience 15 % respondents want to spend more time with family, 14 % want to take better care of their health by jogging, eating healthy food, cooking and baking more often, 12 % would pay more attention to the regional product origin. "We could almost get the impression that the corona virus would make us better people" [45]. Our destructive wreckful behaviour on the Earth has damaged the environment enormously in the past century. We should start a new biological and societal dialogue with the environment including the world of viruses. In conclusion, this outbreak reminds us how current societies are vulnerable both biologically, physically, emotionally and mentally. We have to improve the resilience not on the biological basis but also on mental, societal and spiritual level [46]. After the crisis, humans will, at least for a certain period of time, appreciate things they previously took for granted. In the optimal case, people will have significantly more gratitude for different things and people [47]. Representative German IPSOS research [48] conducted in 16 countries from March 26 to 30, 2020 shows that the majority of respondents (53 %) from 16 countries and 13,785 respondents believe that they will develop a closer relationship with their family and friends as a result of the coronavirus. In Germany, about 4 out of 10 citizens (41 %) believe that the COVID-19 pandemic will strengthen their relationship with their loved ones. In India (72 %), Vietnam (70 %) and China (67 %), significantly more people are convinced of this, but only a minority in Japan (19 %) and South Korea (32 %) believe in this effect.

The cited research results [48] also show that many people try to use the newly gained time at home in a positive way. More than one in five Germans (22 %) thinks it likely that they will acquire new skills as a result of the spread of the coronavirus. In all other countries surveyed, people are even more optimistic that they will gain new knowledge and skills during the pandemic, particularly in Vietnam (75 %), India (74 %), Mexico (64 %), China (63 %) and Brazil (60 %). Caring for the weak

and the infected is a priority in 13 from 16 countries, taking care of their own health is important for one third of respondents. "People are social beings. The positive thing about the coronavirus pandemic is that many people are returning to their immediate surroundings, giving primary social relationships a new meaning" [48]. Physical isolation (staying at home) is also an opportunity to expand knowledge, learn new skills, discover and develop hidden talents. As COVID-19 stirs our compassion, more and more of us realize that we do not want to go back to a normal so sorely lacking it. We now have the opportunity to forge a new, more compassionate normal [34].

CONCLUSION

Crisis is an unplanned and unwanted process of limited duration and impact, which endangers primary goals, with ambivalent outcome. Crisis is a natural phase of transformation and development and it is thus welcomed. Every crisis includes threats and opportunities as well. Crisis management offers answers on how to deal with the crisis: how to avoid it, how to measure it when it occurs and how to get out of it. Lessons learned are the final step in a crisis; if nothing was learned, the crisis comes back in its stronger form, which is the nature of evolution. After the crisis is before the crisis, as the saying goes. This paper focuses on the crisis caused by the COVID-19 pandemic as it discovers some threats and opportunities for humans and planet Earth.

Limits of growth as the awareness of the effects of unlimited production, consumption and waste production on the limited resources of planet Earth is what could have helped us to avoid the crisis, but this has not happened. The crisis arose; the COVID-19 pandemic phenomenon is only one in a row of similar diseases such as Ebola, AIDS, SARS, avian influenza and swine flu. Ecological footprint and Earth Overshoot day are planetary crisis

symptoms. A huge number of people worldwide infected by the coronavirus and virus-related deaths are symptoms of the crisis at the human level. As Albert Einstein stressed, we cannot solve our problems with the same level of thinking that created them. We have to dive a level below. A myopic, decades-long overproduction, splurge of overconsumption and excess waste have brought us to the point where we are now. To get out from this pandemic crisis and to avoid the next one, a new paradigm is needed, changes in human perception of unlimited growth in every area, in business especially. An old saying goes: It doesn't have to come pouring in, it can come in dripping. Humans have to learn how to produce, consume and generate waste in a sustainable way, respecting our only planet Earth and every human, animal and plant on it.

This paper contributes to the current debate on the pandemic crisis, providing holistic insight into the threats and opportunities for humans and planet Earth. The aim of the paper is to stimulate rethinking and reacting, bearing in mind the wealth of our planet Earth with all life forms within its fragile boundaries. A healthy planet Earth is a precondition for healthy humans and all other life forms. We have the responsibility and the choice of shifting from a passive role of the victim to an active and responsible role of the co-creator.

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