1 The phenomenon of the COVID-19 pandemic against the background of its era

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The main idea behind this chapter combines the concepts of ageing and COVID-19. This chapter covers a wide range of issues concerning older persons confronted with the COVID-19 pandemic, covering a wide range of different scientific disciplines, including philosophy, sociology, psychology, medicine, and cultural studies. It also presents an equally broad coverage of the COVID-19 phenomenon, which, despite the flood of publications on the subject, is still a sparsely covered area in the international literature.

Introduction

At the beginning, I would like to add a disclaimer as the author, that I consciously raise a number of sensitive topics that deviate from the usual views. The chapter is of a working nature, its main purpose is to provide material and stimulate constructive discussion, including in the area of omitted topics or conclusions. The author is of the opinion that the current situation forces for a more effective and open discussion, a constructive dispute, in which opposing views often intersect, in order to consolidate the actions necessary for our survival as a species and survival of the planet. Therefore, I do not treat any of the presented views as the only truth, I ask the readers only to assume that my intentions are positive when I proclaim these views.

The goal which the editors of this book, dealing with older adult age-related issues, set for the author as a physician and a psychotherapist was to elaborate an introductory chapter covering analysis of the phenomenon of the COVID-19 pandemic, with particular emphasis on the reference to the mentality of the epoch, its way of understanding the surrounding phenomena and motivation for taking further action.

Percentage of people over 60 years of age in the general population of Poland is growing rapidly. According to the forecast of the Polish Central Statistical Office it will amount to: in 2013—14.7%; 2020—18.9%; 2035—24.5%; 2035—32.7%, which will be accompanied by a decrease in the size of the

general population and a significant decline in the number of young people who traditionally provided care for older family members in the country. If this is supplemented with a high emigration rate of young people and an unfavorable change in their attitudes regarding the obligation to care for older family members, a full picture of the disadvantageous situation is obtained.

Why has COVID-19 appeared?

The changes described above, due to the acceleration of the process of civilization changes, are taking place at a very fast pace, which is not followed by the necessary adaptation of the organizational structures of the medical care system, the social welfare system, and the creation of the necessary infrastructure for effective care for the older adults, which will result in a significant percentage of people older people being handicapped in their ability to maintain the quality of health. They will therefore be particularly vulnerable to COVID-19 and other infectious diseases. This view is supported by the analysis of the current course of the COVID-19 pandemic published by the Polish Society of Epidemiologists and Doctors of Infectious Diseases (Flisiak 2021), which includes detailed information on Poles who died due to COVID-19. The reports were prepared on the basis of data from the SARSTer database (as of January 26, 2021) <http://www.pteilchz.org.pl/>. The data included in this report show that in Poland, 36,780 people died due to COVID-19 in the analysed period, with as much as 94.5% of COVID-19 fatalities in Poland comprising people over 60 years of age, and almost one-fourth of those who died (22.6% to be exact) were over 80.

The COVID-19 pandemic not only hit the older adults right, it also hit the social fabric, institutions, and economic relationships that support them. Acceleration of the progress of civilization with progressive intellectual and physical impairment changes in older people, both related to the progressive aging process, chronic diseases, and the increasing incidence of degenerative brain diseases, causing the growing problem of social exclusion, alienation, and the occurrence of depressive disorders. The large scope of the discussed phenomena makes them one of the main challenges of the post-industrial era in all spheres, including economic, social, moral, and medical.

In the phenomenon of the COVID-19 pandemic, the author distinguishes between a group of medical and biological issues and a group of economic and social issues. Both groups take part in the global civilizational crisis related to the breakthrough of the industrial and post-industrial era and the accumulation of negative consequences of extensive development during the industrial era. The author presents the view that the COVID-19 pandemic is one of the consequences of the industrial era and only a catalyst for the intense phase of the global crisis.

In his previous publications on mental barriers impeding the comprehensive capturing of the COVID-19 pandemic phenomenon (Wasilewski 2020a, 2020b, 2021a), the author pointed out the difficulties in capturing

the full picture of this phenomenon, which requires a synthetic view taking into account the point of view of various specialties. The problem is the current fragmentation of science into very many hermetic detail-oriented sciences and development of specializations and subspecialisations operating within their own language and their own conceptual and terminological systems, often inconsistent with other specializations. At the same time, despite the technological efficiency of detailed sciences in the selected areas, the perception of the world, which is maintained, is often distant from the present day. Still the dominant understanding of the human being within the in Western civilization is one of a privileged being, different from others, endowed with an immortal soul and distinguished by the ability to think, destined to rule the world. Whereas, progress in biological sciences proves that a man is the same multicellular colony as other living organisms on our planet and is an integral part of the biocenosis, the living surface layer of our planet. Despite many elements of autonomy in moving and acting, man is not able to live independently when cut off from other elements of the living organism, i.e., the biocenosis integrated into an ecosystem with the surrounding biotope.

The COVID-19 pandemic was not an unpredictable incident that unexpectedly disrupted the functioning of a well-operating machine of civilization. The COVID-19 from 2020, compared to its predecessor SARS from 2003, is in total less deadly, although identical in origin and very similar in structure, and it gives an infected person a greater chance of survival. The secret lies in the 2–4-day latency in the manifestation of disease symptoms, when we infect others without having disease symptoms, and the frequency of asymptomatic or poorly symptomatic courses of the disease during which the carriers infect hundreds of people (Steenblock et al. 2020). Another distinguishing feature of COVID is the significant increase in the number of chronically ill patients with diseases resulting from the course of COVID infection in the respiratory, digestive, and nervous systems. At the outbreak of the pandemic the industrial-era civilization, which dates back to the second half of the 18th century, had already lost its functionality and stability as a result of extensive use of natural resources, including human health. It boasted that it had significantly prolonged human life, but it did so at the expense of its quality (Wasilewski 2018, 2020c). Humans, as an intrinsically integral element of the living layer of our planet (biocenosis, biotope), has been torn from it, and the parent biotope has been severely mutilated. In order to breathe, the human being needs to be supplemented with green lungs, besides, they are closely integrated with the biocenosis in many other areas necessary for survival and is a transfer element of the uninterrupted flow of matter and information exchange, which is the basis of the functioning of the ecosystem.

Human activities in the last 150 years of the industrial era led to a critical disturbance in the functioning of the ecosystem, to the extent that forced its deep reset in the form of the sixth phase of mass extinction of

species, including the initiation of extinction of humans as a species. Due to the close functional connection of all elements of the biocenosis, its mutilation affects all its elements, including humans. This is most evident in the human population of the Western civilization, the most advanced of the industrial age. The humans of this civilization have largely lost the ability to exist independently, their biological and psychological functioning requires constant support. The degree of human mutilation determines the degree of decrease in human immunity to infections by viruses with which they have lived for millions of years of development. The factual picture of the biocenosis of which man is an element and the biocenosis of every human body significantly differs from the commonly accepted anthropocentric worldview (Wasilewski 2020a, 2020b, 2020c). The anthropocentric understanding of the world, as discussed earlier, does not allow us to notice a rapid reduction of areas with a rich biosphere that allows for a full-fledged human existence and a rapid depletion of its composition, which is caused by human activity. For the same reason, we see the coronavirus only as a factor alien to our environment, as an enemy that appears unexpectedly and is an instrument of unethical warfare, which we must destroy in order to restore our original way of functioning. The imaginative, monumental image of a man – the Master of Nature, does not allow for the awareness that we are only a mega cell colony, similarly to the other creatures with a cellular structure that surround us and inhabit the biocenosis in which we are part. The anthropocentric view of the world denies the ability to think, feel emotions, fight for survival, even to the closest evolutionarily animals – mammals, massively bred and killed as part of the industrial process of producing food that is our food. For analogical reason the group of subcellular organisms, which are predominant in the animate nature in terms of quantity, and include viruses, viroids, phages, prions, and a number of other integral micronutrients of our biocenosis and our organism, are not included as parts of the living world. The human body contains fewer of its own cells than bacterial cells, the number of which is more than ten times greater than the number of subcellular organisms in our bodies. These micro-organisms reach the interior of our body without major obstacles. The average human body transcytoses 3.1×10^{10} phages per day through the membranes of our body cells, and it is believed that this continuous stream of endogenous phages spread through the blood and organs is involved in providing us with antibacterial and antiviral protection (Górski 2020; Nguyen et al. 2017). Each human organism has a specific constellation of phages residing in it, currently we have little information on the factors determining the composition and interaction of phages in the human organism. We know that phages can penetrate lung epithelial cells, protecting against viral infections, and the competitive activity of phages against angiotensin-converting enzyme II (ACEII), which is a target for SARS-CoV and SARS-CoV-2 coronaviruses (Górski 2020; Wasilewski 2010).

COVID-19 and the human immune system

At this point, I would like to explain the reasons for a wider discussion of the issues related to the relationship between the COVID-19 pandemic and the functional state of the microbiome – the flora of microbes living in our body. It is related to the view that the microbiome disorder is the basic factor opening the gate that prevents infection. So, if a systemic damage to our immunity is the cause of the current SARS-CoV-2 pandemic, then fighting it will only stifle the pandemic until the next offensive pathogen appears. The functional state of our body's microbiome is closely related to the state of the microbiome of the surrounding biocenosis, the balance of which has also been disturbed. There is a very significant backlog of research into the microbiome, which has made us powerless when confronted with epidemic threats of the magnitude conditioning our survival as a species (Wasilewski 2021a). Within the biotope the human body constitutes a transit element of an uninterrupted stream of exchange of both building elements, that constitute the elements of biocenosis, and information-related material in many ways of transmission. Civilization of the industrial era led to discontinuation or unfavorable modification of this transfer and disturbed our immunity. The framework of the present publication does not allow for a more extensive discussion of this topic. Other publications by the author (Wasilewski 2014, 2018, 2020c) can be referred to for this topic.

The situation at present is worsened by the failure to adequately conduct research to develop new antibiotics and the therapeutic use of phages (Górski 2020; Nguyen et al. 2017). Due to the significant investment risk related to the development of a new antibiotic at a cost of one billion dollars, where resistance to it can develop after several years of use, only a few companies continue to implement them, and to a limited extent. This resulted in a situation in which Carbapenems, the last implemented group of antibiotics – detected as a defense substance of one of the soil bacteria – were implemented for treatment 36 years ago. Antibiotics from this group are treated as a last resort drug and should be protected against unjustified use, in accordance with WHO regulations. Meanwhile, their main method of use is massive preventive application in industrial farms for the production of slaughter meat, which, as it has been known for many years, leads to the creation of new antibiotic-resistant bacterial strains. In countries aware of the threat of this problem, the preventive use of last-resort antibiotics was banned in industrial farms for the production of slaughter meat, which, unfortunately, is prevalent in a number of Western countries, including Poland. Antibiotic resistance, according to estimates of the Organization for Economic Co-operation and Development, may cause 700,000 deaths worldwide (quoted after the Polish Supreme Audit Office's report of 2017/2018) (Polish Supreme Audit Office's report of 2017/2018). In 2011–2014, the use of antibiotics in agriculture increased by 23%, and Poland ranks second in Europe in terms of the use of the most potent antibiotics in animal

husbandry in the treatment of human diseases. The results of screening tests in the field of antibiotic resistance carried out by the Sanitary Inspection bodies are disturbing. Resistance to antimicrobial drugs was found in 25% of samples of poultry meat, 15% of beef, and 10% of pork (quoted after the Polish Supreme Audit Office report of 2017/2018) (Polish Supreme Audit Office's report of 2017/2018). The first case of total resistance to antibiotics was observed in Asia in 2011, and after a short time also in other areas, including Poland in (2011). It mainly refers to a New Delhi Superbacterium, which is the colloquial name of *Klebsiella pneumoniae* NDM – pneumonia rod, which belongs to the group of intestinal bacteria. The New Delhi bacterium is responsible for life-threatening pneumonia, inflammation of the urinary and digestive systems, meningitis, and many other diseases. Very often it causes sepsis, which ends in the death of every second patient. In Poland, the disease appeared in hospitals in 2011 in Warsaw, and again in 2012 in a hospital in Poznań. However, hospitals did not take appropriate precautions (e.g. infected people were not isolated, which is a necessity) and patients infected each other while wandering between wards. Consequently, in a short time the number of infected began to increase rapidly. According to the data of the National Reference Center for Antimicrobial Susceptibility, in 2013 there were 105 infected people across the country, and in April 2016 this number was 1,100, most of them in Warsaw. However, these figures are underestimated and there are certainly many more infected. As an indication of its destructive progress, the New Delhi bacterium was detected in a patient of the Department of Cardiac Surgery and Vascular Surgery after a heart transplant on the night of July 22–23 in 2018.

The gene for resistance to colistin (an antibiotic of last resort), called the MCR-1 gene, was discovered by scientists at the South China Agricultural Academy in Guangzhou in 2015 and was generated in industrial poultry farming. Although five years have passed since this fact, despite the alarming warnings of experts, as was the case with warnings about the threat of a pandemic related to the virus, the implementation of practical countermeasures preventing another epidemic is ignored.

A similar sin of omission concerns delaying the implementation of targeted treatment and prophylaxis of bacterial and viral infections with the use of phages. A practical achievement of the research conducted in the Soviet Union in the first half of the 20th century was the development of a phage-soaked dressing for frontline soldiers. After the collapse of the Soviet Union the research was abandoned. These studies were successfully undertaken and continued in Immunology and Experimental Therapy of the Polish Academy of Sciences in Wrocław, mainly thanks to Andrzej Górski (2020), however, despite numerous efforts, the team of scientists from the Polish Academy of Sciences did not manage to overcome the organizational and financial threshold allowing for the implementation of industrial production of a phage drug. A recently concluded agreement on continuation of implementation research in China gives rise to hopes.

The triumphant propaganda of success of the industrial era does not allow for awareness of active human participation in the cataclysmic COVID-19 pandemic. The job is supposed to be done by developing a vaccine against the SARS-CoV-2 virus, or by burning the books of wisdom together with their authors, as did the first emperor of China, just to reject the fact of reaching the end of the industrial era, for which nature has billed us. We do not want to accept the fact that the pillaging exploitation of natural resources and of the human organism brought about a disbalance in biocenosis, of which the man is a part and as a result, the human organism lost its capacities to adapt to a harmonious co-existence with micro-organisms, including coronaviruses.

Summing up briefly the importance of the discussed facts about the New Delhi bacterium and for the COVID-19 pandemic, the mechanism of epidemic emergence in both cases is analogous; in both cases the warnings of experts prior to the outbreak of the epidemic are ignored; in both cases there are mental mechanisms that hinder full awareness of the situation. In the case of the COVID-19 pandemic, its course was woven into the steam of a para-war confrontation between the US and China. Crisis phenomena within industrial civilization have been maturing for decades to the stage of revealing themselves now in a form of a global crisis, while the corona virus SARS-CoV-2 was only a catalyst accelerating their avalanche-like disclosure. The global crisis, discussed in the media under the label of the COVID-19 pandemic, is associated with the final collapse of a number of important mechanisms of the industrial era, related to economic, social, ideological, environmental, and medical scopes. They also include the collapse of the global financial system, in which a significant amount of generated cash is not covered in kind, because its main collateral is an excess amount of debt, with a volume significantly exceeding the possibility of paying it off. The existing contractual balance of the interests of the global big players in the financial market has been disturbed, threatening with the collapse of its essential elements.

COVID-19 and the globalization process

The idea of globalization also collapsed. Due to the division of the world into economic, political, and military blocks, that do not cooperate with one another, and a significant epidemic threat, the collapse affected the flow of strategic raw materials, financial resources, the functioning of international production, and investment lines and the flow capacity of goods and people both as tourists and qualified workforce. The idea of globalization in its 20th-century shape lost its functionality. The myth of the benefits of pan-urbanization of the globe collapsed, although it had been visible for decades, it did not cause correction of the continued large-scale activities (Wasilewski 2019, 2020a). Only the occurrence of previously uncalculated significant economic losses, resulting from side effects emerging in the form

of visible consequences of human-induced global climate change and mass extinction of species, caused the collapse of economic calculation of the basic activities of the industrial age. However, the main beneficiaries of these activities do not want to pay the bill for the costs caused, instead they separate themselves economically and militarily, and their main way to respond to the critical threat of unemployment, hunger, and local conflicts of existence of millions of people is isolation and arrogance of power. The challenges of the current global crisis and the changes implemented under the protective mask of the epidemic state of emergency take away what is left of the democratic traditions of the state as a community of equal citizens, sovereign, and superior decision-maker, take away the privacy and inviolability of the home and personal property. This causes great ideological challenges which, given the progressive dysfunction of the structures of democratic states and the triumph of centralist China, can be resolved in most countries more often in street confrontation than in democratic institutions intended for this purpose. On the one hand, there is a need for great universal consolidation and individual sacrifices to overcome the great challenges of the global crisis, on the other hand, it is accompanied by a great distrust towards the broadly understood power and the fall of authorities, causing resistance and lack of conviction to pay a tribute of any of one's freedoms. The factor that further complicates mobilization in order to meet the demands of the moment is a significant acceleration of civilization changes and changes in the human environment at the turn of the industrial and post-industrial eras, which exposed human limitations, human difficulties in following the pace of change and processing overwhelming information, all the more so because traditional social structures, that served as the support point for human beings collapsed and unfavorable psychosocial conditions for creative exchange of thoughts and constructive discussion were created. An additional factor hindering the free exchange of ideas is the widespread commercialization and politicization of the media. If we consider that currently the implementation of change processes accelerated hundreds of times – in some cases – thousands of times, whereas previously it used to spread over hundreds of generations, one should rather expect a turbulent course of the process of adapting to new living conditions and a struggle to maintain the shrinking resources of territories with favorable living conditions. The implementation of such a variant of the development of the situation will activate primary mode of thinking which is functional only in a short-term perspective of the battlefield. In a stable situation it impairs mental functioning, radically reduces the efficiency of more complex activities, including creativity, and impedes biological functioning and psychological well-being of people by disrupting vegetative and hormonal balance. The discussed thinking and, more broadly, mental mechanisms, due to the involved emotional and personality components, determine the specific perception of the world by a significant part of people who want to keep the vision of the world in the perspective of a simplified image of the

world, congruent with its current template. It also is the reason why many people nowadays interpret objectively unambiguous facts in a way unhampered by logic and generally available knowledge. This applies in particular to the COVID-19 pandemic and climate change. A characteristic feature of this type of thinking, the products of which can be seen in its pure form in blogs, is a high degree of emotiveness, symbolic thinking, wishful thinking, and the use of archetypes which were fully functional in primitive communities (the mechanism of returning to the stereotypes of symbolic thinking is described in Wasilewski's book from 2013 (Wasilewski 2013b).

Shifting the mental functioning of citizens to a confrontational, authoritarian mode of thinking has been used and is currently being used to build authoritarian systems or to prepare nations for war. There is a concern that this mechanism could be used as a temporary means of calming the current social unrest and will constitute a barrier to the peaceful consolidation of politically divided people, so necessary today to save our planet. Many people, whose way of mental functioning has been very distant from the discussed archaic forms of thinking so far, have now changed it because of a sense of threat stimulated by the media and politicians, that impregnate people with omnipresent fear and aggressiveness, and overload them with traumatic information that they are unable to organize.

The recent transition of the United States–China conflict from a latent phase into an open conflict phase with the use of economic and propaganda warfare, including the exploitation of the fact of the COVID-19 pandemic, has a strong impact on people's attitudes and their mode of mental functioning. There is a fear that this influence, combined with an increase in governmental authoritarianism will be treated as a way to contain social unrest and prepare for a possible military confrontation. The described mechanism also applies to other countries. The intensity of the information war using the fear of the COVID-19 epidemic is reflected in the wide information campaign undertaken by World Health Organization (WHO): WHO Campaigns/Connecting the world to combat coronavirus/How to report misinformation online (WHO 2020b). The impact of counteractive measures by the WHO when confronted with significant financial and technical resources of the powers involved in the confrontation and used by their armed forces for cyberspace fight have little chance of making an impact, especially when WHO has recently been cut off from the main source of funding. Voters whose mental self-realization and life fulfilment happens through authoritarian ways choose authoritarian leaders. The adoption of an authoritarian, orthodox way of thinking is fostered by the emotional instability of individuals or specific communities. The culminating moment of this impact is the period of the COVID-19 pandemic, but the decades-long process of increasing depression rates in the population of Western civilization is the foundation for the impact that this factor has. Studies conducted over the past decades have shown a significant spread in the incidence of depression in different cultural circles, from 2.0 to 10.0% of the general population in

the countries of Far East Asia to 15–25% (Zeng 2009) in wealthy countries of Western culture (Wasilewski & Egan 2019; Wasilewski et al. 2020) Affective disorders and related psychosomatic disorders have become 14th main civilization threat in Western culture and one of the main obstacles to its further harmonious development – see data from WHO (WHO 2020a).

COVID-19 and health security systems

Health security also collapsed, and humans entered the extinction phase as a species despite focal numerical overproduction. Healthcare challenges are discussed in greater detail elsewhere in the text. The obsolescence of the ethos of the superman, a human demigod, the ruler of the planet, and the conqueror of the world, generated in the industrial era, is accompanied by the erosion of the existing social structure, which is an amalgam of various forms of social functioning, which has not been replaced by a new functional structure, which resulted in the breakdown of the existing social support networks, causing negative social effects and health issues such as physical loneliness, mental alienation, depression, and the lack of social interaction necessary for mental functioning, including mutual support.

The outbreak of the COVID-19 pandemic caused a sharp deterioration in the mental state of multi-million populations. The currently available data are being meta-analysed by Salari and colleagues (Salari et al. 2020), the experience of increased stress was found on average in 29.6% of the respondents (five studies with a total sample size of 9,074), the incidence of anxiety in 31.9% of the respondents (17 studies with the sample size of 63,439), and the incidence of depression on average in 33.7% of respondents (14 studies on a sample of 44,531 people). The studies mainly cover the countries of Far East Asia where previously the level of depression was in the range of 2.0%–10.0% and they concern healthy people who are only at risk of the disease and quarantine. The incidence of anxiety, depression, and stress during the COVID-19 pandemic has been shown to be higher in women than in men. Although the older persons are at increased risk of COVID-19 infection and mortality, the results of previous studies show that during the pandemic, the level of anxiety, depression, and stress is significantly higher in the 21–40 age group. The main reason for this seems to be because this age group is concerned about the future consequences and economic challenges of the pandemic. Psychological symptoms were also found to be more frequent among people with higher levels of education, which is probably due to this group's high self-awareness in terms of their own health. In underdeveloped and developing countries, the COVID-19 outbreaks have a greater psychological impact on the population given that these countries are also affected by many other infectious diseases. Uncertainty about the health status, patient observation, treatment care, and its ineffectiveness in these communities can also increase the vulnerability of such communities to the psychological effects of COVID-19. More severe affective disorders and in

some cases full-blown mental disorders are observed in people suffering from COVID-19, because in some cases the central nervous system is also affected by the disease process. Increased levels of anxiety, depression, and stress in the general population at risk of contracting COVID-19, potentialized by the occurrence of COVID-19-related post-traumatic stress disorder (PTSD), negatively affect the incidence and course of chronic diseases and, by secondary immunity reduction, increase the susceptibility to developing COVID-19. Oncological and cardiological diseases are particularly sensitive to negative psychosomatic effects (Müller et al. 2011; Schulman & Shapiro 2008; Swardfager et al. 2011). It has been shown that the depressive-anxiety component of the disease process is related to the phenomenon of a proportional increase in the frequency of chronic courses of civilizational diseases and the number of cases of long-term disability or permanent disability. The current observations and research on the COVID-19 pandemic are preliminary, the more so as the full medical, economic, and social consequences are only gradually being fully revealed (Wasilewski 2021b). The discussed relationships are of particular importance for the population of old people, which is affected by a high percentage of chronic diseases and the incidence of emotional disorders, because depressive symptoms increase with the increase in the number of accompanying diseases. The prevalence of anxiety-depressive disorders in the older persons depends on the presence of chronic diseases, the degree of disability and dependence on the help of family and third parties. In some of the studies, older adult individuals forced to use social welfare due to disability or financial problems showed over 70% tendency to develop depressive symptoms. Depressive symptoms were found in 30%–40% of people diagnosed with bronchial asthma (Wasilewski & Egan 2018). People after a heart attack show similar results. In some studies, neoplastic diseases caused depressive disorders in 24% of patients. But there are also observations of groups of patients with cancer, in which 91% reported depressive disorders (Wasilewski et al. 2021). Depression in the older persons occurs in 30%–50% of people after stroke, where post-stroke depression) is its specific form and occurs after a span of six months to a year after a stroke. Memory impairment (dementia, Alzheimer's disease) is a particular problem in old age. Older persons may have memory impairment, difficulty in concentrating, and short-term memory problems. Recently, scientists have been conducting research on the relationship between depression and Alzheimer's disease. It is believed that depression may be both a contributing factor and a component of Alzheimer's disease. Depression in the older persons is often very symptomatic of Alzheimer's disease, creating diagnostic difficulties and often delaying diagnosis and proper treatment.

The above-described background of rapid civilization changes, their acceleration and instability characteristic of the breakthrough of the civilization epochs make the older persons, who have always been the post-humous children of the preceding civilizational period, be now separated from the current technical, informational, and mental flow to a degree that

significantly increases their disability and rejection. The existence and material mechanisms that previously maintained the importance of older adults, such as the transfer of a family business or a farm, have mostly disappeared, and the depreciation of all authorities has stripped them of the authority and heroic deeds of the past. Family ceremonies related to the passing and death have been turned into a corridor death in oblivion, which everyone wants to forget as soon as possible. A typically Polish phenomenon of old people maintaining their flat or a farm as their lifetime achievement at the expense of a huge personal sacrifice which is supposed to attract their children back to the country from a temporary emigration, often becomes a pitiful failure. Pious listening to “the wisdom and judgments of the old people”, who are now more often treated as shabby gages guilty of failing to provide their children with material values or education, is no longer prevalent.

Better standards of living and opportunities for education were available to their peers from wealthy countries, which have not been affected by the cataclysm of war and occupation. The undertaken countermeasures, such as the universities of the third age, which I personally support, and the actions of local self-governments and social organizations, still cover only a marginal part of the old people community in Poland, which is becoming the dominant social group.

The outbreak of the COVID-19 pandemic caused a sudden worsening of the mental condition of multimillion populations, as referred to above. The current observations and research on the COVID-19 pandemic are preliminary, the more so as the full medical, economic and social consequences are only gradually being fully revealed. The discussed relationships are of particular importance for the population of old people, which is affected by a high percentage of chronic diseases and the incidence of emotional disorders, because depressive symptoms increase with the increase in the number of accompanying diseases. The prevalence of anxiety-depressive disorders in the older persons depends on the presence of chronic diseases, the degree of disability, and dependence on the help of family and third parties. In some of the studies, older adult individuals forced to use social welfare due to disability or financial problems showed over 70% tendency to develop depressive symptoms. Depressive symptoms were found in 30%–40% of people diagnosed with bronchial asthma. People after a heart attack show similar results. In some studies, neoplastic diseases caused depressive disorders in 24% of patients. But there are also observations of groups of patients with cancer, in which 91% reported depressive disorders. Depression in the older persons occurs in 30%–50% of people after stroke, where PSD (Post-Stroke Depression) is its specific form and occurs after a span of six months to a year after a stroke. Memory impairment (dementia, Alzheimer’s disease) is a particular problem in old age. Older persons people may have memory impairment, difficulty concentrating, and short-term memory problems. Recently, scientists have been conducting research on the relationship between depression and Alzheimer’s disease. It is believed that depression may be

both a contributing factor and a component of Alzheimer's disease. Depression in the older adults is often very symptomatic of Alzheimer's disease, creating diagnostic difficulties and often delaying diagnosis and proper treatment.

The modern world is economically, politically, and ideologically divided, which results in the division in medicine. Western medicine developed expansively in the last century, a flagship product of the now ending industrial age, which boasted of doubling human life expectancy in the 20th century and promised to bring about immortality. In practice, it built a huge pharmaceutical and medical industry, one of the most profitable industries and one of the largest employers, becoming the proverbial bottomless pit and one of the main financial problems of Western countries. Apart from the undoubted successes of medicine, there are often also apparent ones, difficult to assess in the global balance sheet. Decrease in mortality in Poland, observed after a significant practical inhibition of the universal health service as a result of epidemic restrictions is the evidence of a dead end, in which Western medicine is – dominated by the interests of the pharmaceutical industry and the medical industry. Despite the COVID-19 epidemic the decrease was of 8% in April this year compared to April 2019. A similar link was observed in the aftermath of the health service lockdown related to health care strikes in Israel, Canada, and California. Modern Western medicine is a product of a toxic industrial civilization that damaged the biotope and disabled vital defense mechanisms of man and the surrounding biocenosis, stepping into its place as an essential element of life support. However, the long-term decline in the quality of the health service, which in the vast majority dealt only with the treatment of COVID-19 cases while neglecting other patients, resulted in a significant increase in the mortality rate of older adults in Poland.

From patient-oriented, classical, point-impact medicine to health emergencies, Western medicine is now evolving into a life-support industry, a production line of poorly coordinated specialists, each prescribing the same preparations, or drugs that collide with each other. Many older people take 15–20 preparations, which causes large-scale side effects. The main suffering of old people is loneliness, a sense of fear and helplessness in the face of progressive infirmity and impending death. Instead of the antidote in the form of hopeful contact with a physician, a living human being, the patient has contact with an analytical machine and a defensive medical officer. As a response to another complaint, the patient is given another drug, leading to absurdity – the most common first action of a geriatrician that the patient has been lucky enough to get in – is to decimate the amount of drugs taken, often duplicating themselves or remaining in toxic interactions with other drugs taken. In practice, the specificity of metabolism and drug response in old age are ignored. Metabolism-related problems in older adults can have various causes. Bad nutrition, the effects of cancer, the effects of medications – all of this contributes to problems with the digestive system. The effects of

dementia disorders also affect nutrition and fitness (forgetting to prepare a meal, incomplete or omitted/too large purchases, etc.). Malnutrition (also dehydration!) or overeating make the body function improperly, which in turn, affects the mental state of an older person. A significant factor is also the lack of physical activity of older adults – regular physical activity increases the overall mental and physical well-being of the older persons. It also reduces the risk of worsening of depressive symptoms, it reduces sleep disorders. Depressive states in older persons people are often associated with the side effects of drugs, including sedatives such as benzodiazepines and haloperidol, chlorpromazine or fluphenazine, which is exacerbated by frequent addictions to tranquilizers and hypnotics. The discussed problems were multiplied by the consequences of the COVID-19 pandemic, such as quarantine with isolation from the loved ones or a significant reduction in the availability of health care. The isolation of old people during a pandemic often poses a risk of not only loneliness, but also lack of supplies of food, medicines, and hygiene products. Under the slogan of protecting their health, contacts with the family, which were so symbolic before, are often suspended. Nursing homes are a separate topic having the highest number of victims during the pandemic. They are focused on minimal costs, they employ staff working in several houses, who are a seedbed of infections, and provide nursing and medical care which usually is insufficient. What is most needed for a modern patient, and especially for an older patient, is a direct contact with a doctor. Not with a robot that speaks a human voice, but directly with a doctor. There are numerous administrative and technical obstacles on the way, and when they are overcome, it turns out that the doctor is not prepared for this conversation, treats the patient as a problem and a threat and tries to delegate another person of support staff to his place or postpone the matter indefinitely. The author discusses in detail the issue of psychological patient–doctor relations as well as the psychological threats associated with the profession of a health care worker in other publications (Wasilewski 2013).

Returning to the topic of depression and anxiety disorders, which are one of the main health problems of older adults, they constitute a particularly important problem during the COVID-19 pandemic, so they should be discussed in more detail. Attempts to solve the problem of affective disorders through the widespread, chronic use of antidepressants have failed. It has not reduced the incidence of affective disorders, although it has massively increased the spending on treatments and the revenues of pharmaceutical companies. In some urban agglomerations, such as New York, water pollution with excreted metabolites of antidepressants has become a serious environmental problem. Lobbying of pharmaceutical companies is one of the reasons of the almost non-existent budgets for research into potential causes of affective disorders other than biological, including the anthropological and cultural approach to the problem of affective disorders, which has been addressed by the author and researchers related to him a long time

ago already, interested in interdisciplinary cooperation on this problem (Wasilewski 2014, 2018; Wasilewski & Egan 2019; Wasilewski et al. 2020).

Maintaining a narrow understanding of depression as a disease analogous to all other disease entities and applying an analogous treatment and prevention methods to it, faces significant barriers both in theoretical and practical terms – both treatment and prevention. The declared majority of cases of depression do not meet the nosological criteria for being considered a disease, therefore the terms ‘depressive episode’ or ‘depressive syndrome’ are used in diagnosis. Their prevention and treatment are dominated by psychotherapeutic and sociotherapeutic influences and they predominantly have a chronic course associated with somatic diseases. In most cases of depression, a consistent procedure and analogous to the procedure in cases of somatic diseases, leads to invalidity accompanied by a partial or complete withdrawal from professional and personal activity of the patient and adaptation to passive endurance in a separated island of the ‘Archipelago of health care’ (Wasilewski 2013). In a situation of a rapid increase in the incidence of depression and anxiety disorders in the countries of Western civilization, reaching 25% of the general population, there are no financial and organizational possibilities to provide for the treatment and prevention of those disorders in an analogical way, typical of somatic diseases treatment and prevention. An additional factor complicating the situation is the rapidly progressing ‘psychosomatization’ of basic biological diseases, where the psychological component of the disease, including affective disorders, is most often decisive for the transition of the disease into a chronic one, and it becomes the dominant component of the disease. The above-mentioned reasons lead to the view (Wasilewski 2020b; Wasilewski et al. 2020) that most cases of depression accompanying somatic diseases are adaptive symptoms of a defensive-adaptive nature, which are a manifestation of the proper functioning of the body, signaling a disease similarly to pain and leading to the exclusion of an individual from social functions in order for the individual to gain energy to fight disease. In this sense, depressive reactions are an integral part of the symptomatic syndrome of somatic diseases (Szaltys 2014; Wasilewski 2010, 2011, 2013).

Depression, which is a physiological defense reaction, becomes an independent disease in an unfavorable, prolonged course of a somatic disease, constituting a complication of the course of the disease itself. The understanding of depression outlined in this way is clearly visible from the point of view of anthropological analysis or evolutionary psychology. The mechanisms of emotional reactions are very old, inherited from their predecessors in phylogenetic development – such as the anxiety mechanism, which is now one of the main elements of the human social functioning structure. In this sense, anxiety is a defense mechanism if it is in the physiological range of severity and is adequate to the environmental situation, allowing for its constructive use, thus fulfilling the features of a favorable defense adaptive mechanism. According to the author (Wasilewski 2014; Wasilewski

& Egan 2019), a similar situation takes place in the case of depressive reactions. According to the author, from the phylogenetic perspective, they are old reaction mechanisms to a biological, psychological, or social threat. The depressive reaction encompasses the whole organism, slowing down its functioning and reducing energy expenditure while at the same time stimulating biological defense mechanisms. Prolonged depressive states and the related stress lead to the inhibition of cellular and humoral immunity. As confirmed by the meta-analysis of 300 studies, a strong inhibitory effect of stress on cellular and humoral immunity has been proven (Salari et al. 2020). Many further studies have shown a stimulating effect of stress hormones both on the formation of neoplasms and their offensiveness and their growth rate. Behaviour related to depression transmits a signal to the rest of the group at the same time, resulting in the group unburdening the individual from effort-related activities and taking care of them. The image of depressive reactions that functioned in anthropoids millions of years ago and in modern man tens of thousands of years ago was significantly different from the one observed today. The living conditions then required frequent movement and a good physical condition. This allowed only for a relatively short period of a limited migration by the herd due to dysfunction of one of its members.

Thus, everything indicates that the depressive reactions occurring at that time were short-term, severe in course, with a strong accompanying somatic reaction supporting recovery. In the absence of a positive effect of this reaction, according to the author's hypothesis (Wasilewski & Egan 2019; Wasilewski et al. 2020), evolutionary auto-elimination mechanisms are activated, subordinated to the benefit of the group's survival at the expense of the fate of an individual. The process of activation of biological auto-elimination mechanisms was called by the author 'thanatosis' (Wasilewski 2014; Wasilewski & Egan 2019). The term of thanatosis uses on the one hand the term of functioning in ethology – thus, denoting the behaviour of animals imitating their death in a threatening situation, and the concept of apoptosis from the field of cell biology, where cells activate their self-elimination when they lose control over their own modifications in a way that threatens the rest of the body's cells (Rogers & Simpson 2014). Despite the progress of civilization development, archaic mechanisms of thinking and acting survived in modern man and they surface in a situation of the social structure destabilization (Wasilewski 2013). Thanatosis can take place as a fast-running process of self-elimination by means of a sudden cardiac death, which remained as a phenomenon mainly in primary cultures, it can also have a subacute or chronic course, carried out by means of inhibition of biological defense mechanisms. Then, the immune defense is suppressed at the humoral and cellular level, which leads to the activation of disease processes with an inflammatory component and neoplastic processes (Müller et al. 2011).

For further discussion...

Depressive symptoms worsen becoming a fully symptomatic depression, accompanied by a loss of will to live and, most often, acceptance of moving further away from life. The mechanism of stimulating self-destruction processes through the loss of a partner and social bonds, is documented in studies on the relationship between increased mortality and reduction in social relationships; it is also documented in studies showing a significantly higher mortality from a heart attack in single men (Schulman & Shapiro 2008). In other studies, the reduction of cellular immunity in people who lost their life partner was confirmed. This supports the thesis that the breach of the interpersonal relationship based on the bonding mechanism leads to the activation of the Thanatosis mechanism. The described dependencies are the reason for a significant deterioration of the course of chronic diseases observed in older adults and the frequency of neoplastic diseases in the situation of loss of a life partner. A similar effect is observed with the breakdown of an internal volitional support and the loss of meaning in life and the will to continue to endure, while it is an independent dimension of mental functioning, only partially related to depression. Only considering the anthropological perspective of perceiving depression, anxiety disorders and chronic civilizational diseases allows for a full picture of the health condition of old people, which until recently was dealt with by diagnosing a senile depression, normally occurring in senile age, and senility and dementia were related to old age.

This chapter describes the conditions that cause the older persons to be particularly sensitive to COVID-19. They are not only the weakest link in the social tissue currently undergoing erosion, but also the weakest link in the biocenosis of which man is an element. This chapter shows the complex structure of interactive connections between biological, psychological, social, cultural, phylogenetic, and civilization factors that determine susceptibility to COVID-19. The author also attempts to make a comprehensive view of the COVID-19 phenomenon, overcoming conceptual and linguistic barriers dividing various fields of science.

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