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The Pandemics of our Civilization: CoVid-19, SARS, MERS, Avian Influenza. Some Scientific Data, Conspiracy Theories and Spiritual Insights

Abstract

The study is an interdisciplinary analysis, on the borderline between medical sciences, ecology, anthropology, and Orthodox theology, of some of the most critical pandemics of the last century, their causes and effects on civilization. We briefly review important information on avian or swine influenza (A/H1N1, H2N2, H3N2, H5N1), on diseases triggered by SARS-CoV-1 coronavirus



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(SARS) and MERS-CoV beta-coronavirus (MERS), and on the CoVid-19 pandemic, triggered by SARS-CoV-2 coronavirus. We also expose a series of explanations for the possible causes of these pandemics, which are related to (non) compliance with biosecurity rules - in mammal and poultry intensive breeding units, (insufficient) regulations on the wildlife market, and, in general, to an inadequate relationship with the resources of the living world. Some biosecurity norms from intensive animal zootechnics are discussed together with analyses that signal possible epidemiological risks that could occur in case of non-compliance with these norms. In regard to the wildlife market, 3 examples are presented: bats (*Rhinolophus ferrumequinum*), palm tree civets (*Paradoxurus hermaphroditus*) and pangolins (*manis javanica*), while also gaining insight into some of the abusive practices related to these mammals, and the regions of the world where these practices occur. The spiritual perspective, offered by Christian theology, introduces the patristic reflections on the rationality of creation, in the light of the Incarnation of the Logos, and the spiritual way of relating to the living world that flows from it. Also, we briefly analyze some of the anomalies induced by conspiracy theories, currently rather vocal, which affect both the perception of reality, the reception of spiritual considerations, and the lesson of the results provided by science. We have identified some meanings, for all these situations discussed, provided by Christian theology through authors such as Panayotis Nellas, Father Dumitru Stăniloae, and Olivier Clement. These meanings conclude the present analysis by reviewing many dangers that threaten our contemporary civilization (growing social inequities, pollution and waste, overexploitation of resources, misuse of technologies, etc.), emphasizing the need to rediscover and cultivate human interiority, for (re)gaining a

spiritual dimension of life, the only ones - in the vision of Christian spirituality - that can provide the premises for the rational reorganization of civilization.

Keywords

CoVid-19 pandemic, avian and swine influenza, A/H1N1, H2N2, H3N2, H5N1, SARS-CoV-1, SARS, MERS-CoV, SARS-CoV-2 coronavirus, Biosecurity, Intensive livestock farming, wet and wildlife market, epidemiological risks, conspiracy theories, bats, palm tree civets, pangolins, Sociobiology, Christian theology about Rationality of creation, spiritual meaning of living world, social inequity, narrative mind, the power of expertise, God and evil, Christian perspectives about conspiracy

1 Introduction

We have been living in the middle of a pandemic for quite a few months, in our own way, and we find out from various authorized sources that it may take years for us to return to the ordinary life we lived before this special situation. Coercive measures have directly and considerably affected the rhythms of the spiritual and family life, social and economic rhythms, as never before in recent decades, and will continue to do so for a long time. The obligation to remain confined within our homes, the disappearance of close people, whose lives were quickly taken by the new coronavirus, or the isolation of loved ones, for several months, in places where we are forbidden to reach, losing jobs, and all the other have charged a lot the social atmosphere. These cannot be left without an explanation. We are, in fact, pushed into looking for the causes of this situation

and, as often, we are eager to find those meanings that can help us understand why all this is happening to us.

2 Pandemics: from conspiracy to interdisciplinary approach

In this line of thought, having taken this path, experienced by those who dare, in order to gain a better understanding, we could take into account the various insights provided by science, but also the philosophical and spiritual reflections, increasing the chances of coming to light.

We are convinced that, in these months that are uncommon for the last decades, it is appropriate to analyze, from as many perspectives as possible, the whole crisis. I am referring to attempts to put together various recent scientific discoveries and old spiritual considerations, the latter most often succeeding in providing more substantial core, succeeding in highlighting the close connection between major world events and the inner imbalances of the human spirit. The journey taken in the territory of scientific data is worth completing with recourse to the texts of the Holy Scripture and to their spiritual meanings as revealed by the Holy Fathers. On the one hand, the clarification of the events we are going through is indispensable related to the data and scientific analyses, to the many details gathered so far about pandemics, about their causes, spread and effects. On the other hand, The Holy Scripture, as a spiritual radiograph of the humanity, offers a completely different angle: the Creator's perspective on Creation and His being, a paradigmatic picture of the world and of our lives that reveals both the presence and work of God. Obviously, it is important to remember that those spiritual meanings of the biblical places

we need are made clear by the interpretations offered by the holy fathers.

2.1 A precious ingredient: the dialogue between science and spirituality

We are trying to pursue such a double reading, i.e. scientific and spiritual, of current events, with the hope that we could achieve an interdisciplinary approach, able to offer a new breach into the current reflection. Let us put together faith and reason, spirituality and science, placing the data of scientific research and technical achievements of the present in the context of human life and of the world, following the connection of external aspects to our depths. This is, as a rule, the offer of spiritual meanings, discovered in the Christian space in the light of the revealed biblical texts and through the interpretations offered by the holy authors of the Christian tradition.

The scale and dramatism of the events, but also the way they affected our lives caused a real storm of analysis, evaluation and possible interpretations; some carefully crafted, with a distinct technical character, provided by observers accustomed to social and medical dynamics, others brief, hurried, superficially constructed, panicked or fueled by distrust of official discourse. Administrative and medical decisions and communiqués could not be missing from the setting of this exceptional situation. A multitude of economic, financial, sociological, anthropological analyses, as well as various psychological and psychotherapeutic considerations, which concern the new living conditions and their challenges, have been added. Finally, we have also dealt with geopolitical factors, which assess the degree of cooperation between states and regions and how the pandemic has reconfigured these relations. Obviously, as a constant of the last decades, among this multitude of regulations and information, evaluations and

interpretive intentions, there are also conspiracy theories, effectively spread through social networks.

We also propose, next to all these approaches, this interdisciplinary view, looking for two points of support: one in recent scientific evaluations and the other in venerable spiritual findings.

2.2 The conspiracy theory: an additional reason for the interdisciplinary approach

One of the reasons why such analysis is worth developing is the ease with which many have embraced conspiracy theories. Immediately after the outbreak of the pandemic and after the implementation of the appropriate measures for the emergency situation, on social networks and in certain media, fake news and some conspiracy theories began to spread. One of them spread quite quickly, claiming that the CoVid-19 pandemic is caused by an artificially made virus.

The effectiveness and damage of conspiracy are a separate subject of discussion. We shall not now discuss here the damage these theories cause. This deserves full attention because there is often a cleavage between conspiracy theories and reality. Many of them have nothing in common with science, being outside philosophy and, at the same time, external to a theological approach. Thus considered, conspiracy theories lack any connection to the world. The triggering and the evolution of events are, as a rule, in the hands of others, a secret group located beyond the limits of our competences and actions. Someone or something else, a secret organization, an esoteric order, controls everything.

In fact, operating in this way, conspiracy theories have a triple expulsion. On the one hand, they take us out of the concrete game of life, relieving us of any responsibility for the situation;

on the other hand, they discourage the effort of any action. We have no reason to act because we can't change things anyway! Finally, not only do they disconnect us from the analysis and actions related to the situation as such, but also isolate us from the whole context of life, whose authenticity we no longer recognize.

In contrast to these approaches, the dual propensity - to science and theology - could better place us in the context of facts and evidence about the world's challenges, and provide better explanations and insights into the possible connections these challenges have our own views and facts. We could gain a lot, in terms of responsibility and involvement. Nowadays, the discussions about the many threats of civilization, about the challenges to our hyper-connected globalism are not absent, but there are no concrete efforts to link all these broad phenomena to the narrow horizon of life of each of us, the way we think and act right now.

Many authors of Christian theology in the East have shown an equally generous, full of confidence, careful and demanding openness to culture, philosophy or science, but also to arts or technology. They stated that in all these, there are aspects that could be used in expressing the truth of the faith. We are dealing with a manner of theologizing that does not reject as irrelevant those things that are outside the realm of theology. Rather, it receives and capitalizes spiritually everything that, in the light of the Truth of Faith, seems to be good, useful. The good things that man has done - whatever they are and whoever he may be, wherever and whenever he lives - can be connected with the Almighty God. We find such approaches in the works of important holy authors in theological thought, St. Paul, St. Justin Martyr and Philosopher, Basil the Great, Gregory of Nyssa, Gregory of Nazianzus, Maximus the Confessor. Each of these saints placed the knowledge, the findings of philosophical

reflections or artistic creations in a spiritual light. By doing so, the Fathers insist on the importance of a pattern of understanding that we should also embrace. Not only do the realities themselves prove to be closely linked to the cultural, civilization and spiritual course of man and of the world. It is about the fact that the whole world and the life lived in it, biography and history, have spiritual meanings for man, so that the correct position of man in the world and in history, becomes necessary and opportunities for meanings¹.

¹ In these enterprises of the spirit, which place our daily conduct and achievements directly in the rarefied layer of the spiritual life, the distinct silhouette of Christian spirituality may be glimpsed at. Every gesture, every action, whether a creative effort or an engineering undertaking, the construction of a house or the medical care of a sick person, each of these and everything similar remain from beginning to end, within the boundaries of meaning. The bet that Christian spirituality proposes to life is precisely this, that through the Life of the Risen Christ, all its movements should be valued, regardless the diversity of works and the uniqueness of the subjects in question. Every man should find a suitable place. After all, all man's activities count for his salvation. Spirituality is authentic only with this double socket, which includes the global and the particular, at the same time, connecting them. One's spirituality is authentic only if it remains equally set in the world and in heaven, paying attention to both sides of existence, trying not to detach oneself from the seemingly meaningless daily life or from the divine that offers meaning. Therefore, a person's spirituality is not only state, it is also permanent labour, the effort to unite heaven and earth, the effort to discover heaven on earth and to announce the long-awaited and possible entry of the earthly world into heaven. The spiritual life is neither captive to the horizontal world, nor completely detached from it; it does not remain isolated in heaven, ignoring matter, having no use for it, for worldly ridicule; it is not completely detached from heaven, unknown of God either. Here are the dangers of conspiracy theories. Adhering to them, we are on the wrong position in regard to the world, outside its data, on the back of the optics of clear, palpable evidence, with our backs to the landmarks of the present. And, by this, we also forbid

However, a small effort must be made to dismantle the conspiracy of the moment. In this sense, it must be said that there are arguments that support the idea that we are not dealing with an artificial virus, but with a naturally occurring one.

3 Seven pandemics in the last century. A brief review

A recent history, full of ignored lessons

History provides us with the first evidence that could support the idea that the virus is natural. That is because there have

spirituality to provide us with a higher meaning for all these fragments. The conspiracy theory dismisses the theological perspective on the world and on human facts; the first leaves the second without object. And, without edifying meanings, how will we organize our perceptions and actions? This is the case with the theory that the Earth is flat, or that the lunar missions of the late 1960s are just pranks. A similar thing occurs with SARS pandemics and, more recently, CoVid-19. The conspiratorial explanations take us out of contact with the present. Entirely rejected, considered to be fake, human achievements are also removed from the metabolism of our spirit, along with all that they could reveal to us. (The cultural and spiritual silhouettes of the human being, the entire pulsation of life are admirably imprinted in the human achievements that the conspiracy ignores.) Therefore, in conspiracies, the world and life lose depth. The follower is extracted from the constellation of human deeds, considering them a manipulative media creature, living only on the plane of the conspiracy and receiving only the meanings offered by it. He has no other explanation for what is happening, nor does he need such a thing. Except for a secret group that leads, the follower believes that neither he nor others have ways of somehow influencing things. Life and the present remain captive, at the discretion of occult forces. At least in such respects, conspiracy theories interfere with the correct reception of science and theology, history and the state of affairs, distort the perception of the present and the architecture of our actions. They ultimately distort the face of man, his roles and performances, as they were, as they are and how they can be, good or bad, along with everything that hereafter derives.

been many similar situations with dangerous viruses, some from the same coronavirus family².

3.1 Five episodes of avian flu in the last century

During the last century, mankind encountered, for example, various pandemics, in varying degrees of severity and extent³. Five epidemiological events, that were worldwide recorded, would be worthy of attention here. The first of these occurred in 1918-1919, namely the Spanish flu, which spread to many countries, such as China, Great Britain, the USA, Brazil, New Zealand, the Dutch East Indies, Ghana, but also in many Pacific islands. The analyses made so far show that it was an unusual flu, with a higher mortality rate and many casualties among young people and adults between the ages of 15 and 34⁴.

² It only takes a brief review of the last century. Afterwards, some of the biblical places and the reflections of the Holy Fathers on the texts, which reveal edifying meanings for the current extraordinary situation, will follow. In fact, current data can be echoed in theological meanings concerning evil, suffering, and death, at the heart of the patristic reflection on the fall of Adam. We shall see that, although we try to set in our minds the pandemic we are experiencing at present, in order to understand its spiritual valences, our whole reality is encompassed, in an unexpected way and in an edifying way, in an event of humanity that took place in time immemorial, at the fall of Adam. Here is the beauty of the biblical text!

³ Conspiracy theories also circulated during those events, attempting explanations such as those that are being spread nowadays.

⁴ B. Jester *et al.*, "Readiness for Responding to a Severe Pandemic 100 Years After 1918", *American Journal of Epidemiology*, Volume 187, Issue 12, July 2018, pp. 2596-2602. <http://DOI:10.1093/aje/kwy165>. After the endeavours of a young doctoral student at the University of Yowa, Johan Hultin, a 25-year-old Swedish microbiologist, the medical world was able to take possession of the Spanish flu virus in 1951, after his expedition to a remote Inuit village in the cold Alaska, a region heavily affected by the Spanish flu. The explorer took advantage of the fact that all the people who died of Spanish flu in Brevig Mission were buried in

As subsequent research suggested, the flu was of bird origin, caused by a strain labeled H1N1, a subtype of A influenza viruses⁵. The Spanish flu spread via an intermediate mammal, the pig, which supported the jump of the virus from birds to humans⁶. The war period, traversed in those years, prevented

frozen ground. The low temperatures, throughout the year, contributed to the preservation of the deceased, buried in the permafrost layer. The Swedish explorer received approval of the residents to take lung tissue from the lungs of their ancestors and was able to return to the laboratory with lung tissue samples. He managed to inject tiny tissue samples into chicken eggs and provided the medical world with the dreaded virus for research. The story of this exploration is winding and spans over several decades.

- ⁵ There are four types of influenza viruses: A, B, C and D. A influenza viruses infect humans and animals, having, in its various forms (subtypes), an important potential to trigger pandemics. Those of type B occur seasonally, are usually transmitted from person to person and cause what is commonly known as seasonal flu. Recently, B influenza viruses have also been detected in seals. C influenza viruses can infect humans and pigs, but infections are generally mild and rarely reported. D influenza viruses mainly affect the cattle and there are currently no data on possible infections with D influenza viruses in humans. Each of these types of viruses, in turn, contains subtypes that have the actual composition of the virus. For these considerations, we consulted the WHO (World Health Organization) website:

[https://www.who.int/news-room/fact-sheets/detail/influenza-\(avian-and-other-zoonotic\)](https://www.who.int/news-room/fact-sheets/detail/influenza-(avian-and-other-zoonotic)) and the site of the Queen Mary Hospital in Bucharest (<https://www.reginamaria.ro/articole-medicale/gripa-facunos tinta-cu-virusurile-gripale>).

- ⁶ In one of the articles that tried to clarify the origin of the Spanish flu, the authors wrote that the analysis of the virus showed that the sequences of the 1918 virus (H1N1) are distinct from the currently available avian strains. A possible explanation for the origin of this virus is that, around 1918, there was another avian strain, similar to the pandemic virus, which entered, with few modifications (antigenic drifts), the human population. But this hypothesis, the authors assert, cannot be tested because the avian virus, which has affected birds since 1918, was not retained. Another possibility would be that the pandemic virus had adapted to mammals before 1918, accumulating repeated episodes of changes that proved sufficient to make it more penetrating into the

careful analysis and statistics, so that the assessments are uncertain. It is estimated that the number of diseases was between 100 and 500 million⁷, and deaths - about 50 million⁸. Other estimates suggest up to 15 million deaths in 1918 and another 2.5 million in 1919⁹.

Four decades later, in 1957, humanity faced another flu – the Asian flu, the H2N2 subtype. It appeared in Singapore, spreading to Hong Kong and the United States and claimed approximately 1.1 million lives worldwide¹⁰. It is important to

cellular mechanisms of mammals, with a possible date of entry into the population between 1900 and 1915 (Cf. A. Reid *et al.*, "Origin and evolution of the 1918 *Spanish* influenza virus hemagglutinin gene", *Proceedings of the National Academy of Sciences of the United States of America* - PNAS, February 1999, Volume 96, Issue 4, pp. 1651-1656). The lack of evidence makes it difficult to clarify the origin, but it is important, for the following considerations, to keep in mind the idea that the origin of the Spanish influenza virus is in the avian or swine sphere.

⁷ Cf. J. K. Taubenberger *et al.*, "1918 Influenza: the mother of all pandemics". *Emerging Infectious Diseases*, Volume 12, Issue 1, January 2006, pp. 15- 22. <http://DOI:10.3201/eid1201.050979>.

⁸ Cf. P. Johnson, J. Mueller, "Updating the accounts: global mortality of the 1918 – 1920 «Spanish» influenza pandemic", *Bulletin of the History of Medicine*, Volume 76, Issue 1, 2002, pp. 105-115; Cf. "Ten things you need to know about pandemic influenza (update of 14 October 2005)", *Weekly Epidemiological Record (Relevé Épidémiologique Hebdomadaire)*, Volume 80, Issue 49-50, 9 December 2005, pp. 428-431, available online: https://apps.who.int/iris/bitstream/handle/10665/232955/WER804_9_50_428-431.PDF.

⁹ Cf. P. Spreeuwenberg *et al.*, "Reassessing the Global Mortality Burden of the 1918 Influenza Pandemic", *American Journal of Epidemiology*, Volume 187, Issue 12, 1st December 2018, pp. 2561-2567. <http://DOI:10.1093/aje/kwy191>.

¹⁰ Information published by The Center for Disease Control and Prevention (CDC), at <https://www.cdc.gov/flu/pandemic-resources/1957-1958-pandemic.html>.

note that in the case of this Asian flu, the virus is also of bird origin¹¹.

About ten years later, in 1968, the Hong Kong flu appeared. It is also a subtype of H3N2, related to H2N2. Research has shown that, most likely, the origin of this virus is related to pigs co-infected with human and avian viruses, which in turn transmitted this virus to humans, without ruling out that the virus was transmitted directly from birds to man¹². Forms of Hong Kong flu reappeared in 1969, 1970 and 1972, killing more than a million people, including about 100,000 in the United States alone.

Three decades later, between 2004 and 2007, avian flu appeared, being of the H5N1 subtype. First detected in China in 1996, the virus spread in a decade to more than 50 countries in Africa, Asia, Europe and the Middle East¹³. Genetic analysis has revealed that H5N1 is of avian origin. It is now known that it first appeared in birds, causing tens of millions of casualties among them. Subsequently, the virus was transmitted to both animals and humans. Hundreds of millions of birds were killed to limit its spread. There were few casualties, but not because the virus was not dangerous. In reality, the mortality rate was almost 50%¹⁴! The number of people who got sick (861 people)

¹¹ Cf. T. C. Harder, O. Werner, "Influenza Report 2006", chapter 2, available online: <http://www.influenzareport.com/ir/ai.htm>.

¹² Ibidem.

¹³ "Highly Pathogenic Asian Avian Influenza A(H5N1) Virus", information published by Centers for Disease Control and Prevention, available online at <https://www.cdc.gov/flu/avianflu/h5n1-virus.htm>.

¹⁴ This mortality rate is very high, of course. It helps us to assess *the severity index*, a scale introduced by international bodies, which takes into account the mortality rate in the assessment of pandemics. The scale comprises five steps, from level 1, corresponding to a low severity, to level 5, meaning a high degree of severity. Stage 1, in the severity index, corresponds to pandemics that have a mortality rate of up to

and of the victims (465) was small only because the virus was transmitted exclusively from birds to humans, not from human to human. Therefore, those who, for various reasons, carried out activities around infected birds were exposed to the disease. The H5N1 flu has reappeared for several years in a row, with fewer and fewer outbreaks (65 outbreaks in 2006, 55 in 2007, 11 in 2008). Likewise, the number of victims among birds and humans has decreased successively¹⁵.

Five years later, in 2009, the A / H1N1 (S-OIV) swine flu virus appeared in Mexico and the USA¹⁶. In the first weeks of

0.1%, which means one death for every 1,000 diseases. This level of severity is specific to common seasonal flu, but also to swine flu (A/H1N1). The second stage targets pandemics with a mortality of between 0.1 and 0.5% (meaning up to five deaths to one thousand sick people), a range that includes both Asian Influenza (H2N2) and Hong Kong Influenza (H3N2), which we are discussing. The third and fourth categories in the severity index are for pandemics with mortality rates between 0.5% and 1% (meaning between 5 and 10 deaths per thousand diseases), respectively 1.0% and 2.0%. (i.e. between 10 and 20 deaths for every thousand diseases. Finally, the last step (category 5) corresponds to pandemics with mortality greater than 2% (meaning more than 20 deaths per thousand diseases). (Cf. R. Roos, L. Schnirring, "HHS ties pandemic mitigation advice to severity", *Center for Infectious Disease Research and Policy*, 1st February 2007, available online: <https://www.cidrap.umn.edu/news-perspective/2007/02/hhs-ties-pandemic-mitigation-advice-severity>). The last category of severity includes the Spanish flu, avian flu (H5N1) and, as we shall see, SARS, MERS and CoVid-19. Considering the fact that the last stage of severity means more than 20 deaths per thousand diseases detected, we can estimate a mortality of 50%, i.e. mortality of influenza with H5N1 subtype. This corresponds to a number of 500 deaths for every thousand diseases, 25 times more than the last milestone of the severity index!

¹⁵ It is important to say that the measures taken to limit outbreaks and the administration of vaccines for birds, and later for humans had an important role in stopping the spread of this new strain.

¹⁶ Cf. "Swine influenza A (H1N1) infection in two children – Southern California, March – April 2009", *The Morbidity and Mortality Weekly*

surveillance, the virus spread worldwide in 30 countries through inter-human transmission. At the time, various articles appeared, signaling the dangerous potential of the virus, as well as the possibility that it could trigger a pandemic¹⁷. Until now, A/H1N1 transmitted through respiratory fluid particles, has spread to 213 countries and territories, including Pakistan, Malta, Morocco, Iran, India and Canada. Some estimates, provided by a prestigious publication, indicated globally, in 2009, between 150,000 and 575,000 deaths¹⁸. Although the mortality rate was only 0.03%, it was strongly stated that the danger should not be neglected, as possible changes (genetic shifts) could lead to the emergence of new viruses, more dangerous, with pandemic potential in humans¹⁹.

3.2 Shortly before COVID-19, two other warnings: SARS and MERS

Before any discussion of the SARS-CoV-2 coronavirus, which triggered the CoVid-19 pandemic, two other events must be introduced in the short list of these waves of epidemics and pandemics of the last century.

Report, 58, 2009, pp. 400-402, provided by Centers for Disease Control and Prevention, available online:

<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5815a5.htm>.

¹⁷ One of the texts, published in the prestigious scientific journal *Nature*, exposed the evolutionary aspects of the virus, rejecting the idea - circulated then, as today - that it was a structure created in the laboratory. However, we will discuss these approaches a little later.

¹⁸ Cf. F. S. Dawood *et al.*, "Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study", *The Lancet*, Volume 12, Issue 9, 1st September 2012, p. 694.

¹⁹ Cf. K. F. Shortridge *et al.*, "Persistence of Hong Kong influenza virus variants in pigs", *Science*, Volume 196, Issue 4297, 1977, pp. 1454-1455.

The first refers, of course, to the pandemic known as SARS (Severe Acute Respiratory Syndrome), which affected the world between 2000 and 2003. Transmitted by respiration, SARS spread to 30 countries, covering large regions in Europe, the USA and Canada, New Zealand and Australia, China and many Asian countries. It caused over 8,500 illnesses and over 700 deaths. Perhaps nowadays, when the number of CoVid-19 coronavirus sick ones has exceeded 3.5 million, the number of SARS diseases seems to be very small. However, at the time, the danger was considered extremely high, taking into account the high mortality rate, between 9 and 11%²⁰.

In the case of SARS, the origin of the virus has nothing to do with birds or pigs. It is a coronavirus (denoted SARS-CoV-1), a different virus from the A type, discussed above²¹. SARS is caused by the SARS-CoV-1 virus, that most likely derived from the greater horseshoe bat (*Rhinolophus ferrumequinum*), which made an intermediate leap to the palm civet (the Indonesian cat, *Paradoxurus hermaphroditus*), after which, it reached man.

The second event is the camel flu (MERS - Middle East Respiratory Syndrome), reported between 2012 and 2019. The epidemic was caused by another coronavirus, called MERS-CoV. It is a flu with a clinical spectrum similar to SARS (fever, cough,

²⁰ By comparison, the usual seasonal flu (with strains of the influenza virus type B), has mortality of 0.1%, i.e. one death per thousand diseases. With a mortality of between 9 and 11 percent, SARS is almost a hundred times more severe.

²¹ The term *coronavirus* has been used since the mid-1960s, naming the crown-like outline of these viruses. Coronaviruses have a jacket, a spherical membrane. They do not possess DNA, only RNA (Cf. D. Bai *et al.*, "Porcine Deltacoronavirus (PDCoV) modulates calcium influx to favor viral replication", *Virology*, Volume 539, 2nd January 2020, pp. 38-48. <https://DOI.org/10.1016/j.virol.2019.10.011>.)

respiratory failure), which has varying degrees of severity, from asymptomatic, mild respiratory diseases to severe pneumonia, which ultimately affects several organs. And in the case of MERS, the mortality rate was very high, but the virus was not able to pass from person to person. However, there have been significant expansions, after first manifesting itself in the Arabian Peninsula, reaching Austria, China, France, Germany, Greece, Italy, the Netherlands, the Philippines, South Korea, Thailand, the United Kingdom or the USA. Between 2012 and 2019, MERS was detected in 27 countries, with over 1,360 people, causing 527 deaths, so having an extraordinary mortality rate of over 35.7%. It is important to mention that the genetic analyses revealed that MERS-CoV also probably originates in bats, having as an intermediate, in the transmission to humans, the camel.

Finally, we can now discuss SARS-CoV-2 - CoVid-19, the pandemic that is affecting us now. Since the 31st December, the day when a case of CoVid-19 was first reported, little over 120 days have passed. In the meantime, the CoVid-19 pandemic has already reached (at the time of the printing and distribution of this study), around 8 million diseased and 450,000 deaths in over 210 countries and regions around the world²².

There are many differences between SARS-CoV-2 and what we commonly call seasonal flu. Although the time elapsed so far is still too short, researchers have gathered enough clinical evidence to draw some major differences between seasonal flu and CoVid-19. A separate study could also be written about these situations, also highlighting aspects relevant to the spiritual life²³. For now, however, we refer only to the aspect

²² See <https://www.worldometers.info/coronavirus/#countries>.

²³ It is about the way we usually question the things we should accept, often to our detriment.

that concerns the origin of the SARS-Cov-2 virus. An article published in the prestigious journal *Nature* dismantles a cliché similar to the one that appeared on the occasion of SARS: the new coronavirus is not produced artificially in the laboratory²⁴. The source of SARS-CoV-2 is, most likely, bats, intermediaries are pangolins²⁵.

4 How do pandemics emerge? Some possible causes, from the point of view of science and small echoes of ethical nature

4.1 Civilization, prosperity and abuse

So far, we have discussed two families of viruses, those in the avian category (A) and those in the coronavirus family (related to SARS and MERS). Each involves birds and pigs, on the one hand, and bats, the civets, pangolins and camels, on the other hand. It is important to say that there are also observations that imply elaborate explanations about how the viruses could

²⁴ Cf. K. G. Andersen *et al.*, "The proximal origin of SARS-CoV-2", *Nature Medicine*, Volume 26, 2020, pp. 450-452, available online: <https://DOI.org/10.1038/s41591-020-0820-9>.

²⁵ We shall next see that here have been several hypotheses, one of which claimed that the intermediary was the snake (Cf. H. Guo *et al.*, "Snakes could be the Original Source of the New Coronavirus Outbreak in China", *Scientific American*, 22 January 2020, available online: <https://www.scientificamerican.com/article/snakes-could-be-the-original-source-of-the-new-coronavirus-outbreak-in-china/>). More and more evaluations show that the virus might have been mediated by the pangolin (Cf. C. Zhang *et al.*, "Protein Structure and Sequence Reanalysis of 2019-nCoV Genome Refutes Snakes as Its Intermediate Host and the Unique Similarity between Its Spike Protein Insertions and HIV-1", *Journal of Proteome Research*, Volume 19, Issue 4, 2020, pp. 1351-1360. <https://DOI:10.1021/acs.jproteome.0c00129>). We shall get back to this issue, with further details.

trigger the mentioned pandemics. In short, it is about the very large-scale use of living world species, in an abusive, irrational manner and without proper hygiene measures. We will see that these causes could determine the appearance of the pandemics that we have mentioned.

Numerous voices, from various fields of expertise, virologists, epidemiologists, food industry specialists or researchers in the field of ethology (animal behavior science) have issued warnings regarding our interaction with the living world. These analyses have intensified, especially after the huge transformations that the development of technologies have caused. Extensive research has been done over a long period of time and in many large regions comprising several states. In much of this research we find strong signals about this brutal way in which we have become accustomed to using the resources of the living world.

4.2 Intensive animal zootechnics and the dangers of pandemics

A zootechnical structure intended for the intensive rearing of birds or pigs for consumption cannot function unless a whole set of conditions are met. These are strict rules regarding the assurance of air quality and temperatures, water and food quality, but also the areas where the farms are located. For example, farms must be located in places far enough away from sources of pollution, have ventilation facilities, cemented floors, strict procedures for transporting animals, rules for handling food²⁶.

²⁶ Biosafety and Biosecurity regulations also stipulate, for example, the keeping of birds or pigs in completely enclosed areas, the restriction of visitors through a single access point containing a disinfection gate, the prohibition of contact areas between farmed and wild birds, cleaning

On the other hand, for economic reasons, intensive animal zootechnics structures place a large number of birds or animals in small areas, and this complicates the management of biosecurity. Crowded in tight spaces, mammals live very close to each other, which makes it difficult to protect them. Once inside a farm, the virus will spread quickly from animal to animal and, if possible from animal to human²⁷. In fact, enclosed places where animals live are often a suitable environment for the survival of viruses²⁸. Dangerous situations may also emerge if the units intended for birds and pigs are concentrated in the same area²⁹, as this increases the incidence of genetic assortments of viruses³⁰, and epidemiological hazards.

and disinfection, periodic use of equipment used in breeding processes, protection of food and water from fecal contamination, safe storage of food, continuous monitoring and periodic decontamination of water sources (Cf. "Poultry Development Review", p. 104, online at <http://www.fao.org/3/i3531e/i3531e.pdf>). Avoiding the illness of workers, but also of animals or birds on farms depends, therefore, on many conditions, which must be strictly observed.

²⁷ Cf. "Zoonotic diseases, human health and farm animal welfare", *World Society for the Protection of Animals*, 2013, p. 10.

²⁸ For example, in spaces without natural light, even the rays of the sun that could be inactive through ultraviolet radiation, some mechanisms which viruses depend on, are absent (Cf. T. P. Weber, N. I. Stilianakis, "Inactivation of influenza A viruses in the environment and modes of transmission: a critical review", *Journal of Infection*, Volume 57, Issue 5, November 2008, pp. 361-373, available online: <https://www.ncbi.nlm.nih.gov/pubmed/18848358>).

²⁹ Cf. J. Otte *et al.*, "Industrial livestock production and global health risks. Food and Agriculture Organization of the United Nations", *Pro-Poor Livestock Policy Initiative Research Report*, 2007, available online: <http://www.fao.org/3/a-bp285e.pdf>.

³⁰ Viruses, less complicated structures than a cell, have a segmented nature of the genome, which facilitates the "rearrangement" process.

On the other hand, if the ventilation systems are not efficient, accumulations of viruses can occur inside. Therefore, regular analysis of air samples, especially during the outbreak of a nearby outbreak, is essential³¹. But the transport of live pigs, as well as that of birds, can increase the risk of emergence of new viruses³².

Two different influenza viruses, for example, co-infect a cell, combining their genetic segments, and this often allows for a virus adjustment and, subsequently, an increased risk of virus transmission. This is how it is transmitted from birds to pigs, from pigs to humans, from mammals such as bats to civets and then to humans, as in the case of the beta-coronavirus SARS-CoV-1. Rearrangement is the very process of generating new and new strains, a dynamic that can have a significant epidemiological impact. A 2014 study, for example, looked at viral genotypes generated over time in a host co-infected with two influenza viruses, finding that the diversity, determined by reassortment, is considerable, depending on the amount of each virus that initiates the infection. The results of the study show that the rate at which rearranged influenza viruses occur exceeds, under certain conditions - even 50%! (Cf. H. Tao *et al.*, "Intrahost Dynamics of Influenza Virus Reassortment", *Journal of Virology*, Volume 88, Issue 13, June 2014, pp. 7485-7492. <http://DOI:10.1128/JVI.00715-14>.)

³¹ Measures of this kind have revealed that, during an avian or swine flu, the virus can be found in the air outside the barns, which means that ventilation systems are necessary and they fulfill their role (Cf. "Zoonotic diseases, human health and farm animal welfare", *World Society for the Protection of Animals*, 2013, p. 10.)

³² For example, the transport of pigs between Eurasia and North America most likely facilitated the mixing of various swine influenza viruses, contributing to the genesis of the Hong Kong influenza virus strain (K. F. Shortridge *et al.*, "Persistence of Hong Kong influenza virus variants in pigs", *Science*, Volume 196, 1977, pp. 1454-1455). Domestic pigs have been described as „mixing-vessel“, mediating, by genetic rearrangement, the emergence of new flu viruses with bird genes in the humans and by generating a pandemic associated with antigenic change (Cf. Wenjun Ma *et al.*, "The pig as a mixing vessel for influenza viruses: Human and veterinary implications", *Journal of molecular and genetic medicine: an international journal of biomedical research*, Volume 3, Issue 1, 27 November 2008, pp. 158-166; R. E. Kahn *et al.*, "Swine and Influenza: A Challenge to One Health Research", *Influenza Pathogenesis and Control*,

Other times, the violation of biosecurity rules is done intentionally. In order to reduce costs and increase productivity, some farmers increase the number of birds or animals, and relax hygienic conditions, especially where control mechanisms and subsidies for modernization are lacking. To avoid making the animals sick, they increase the doses of antibiotics³³.

We must also add what often escapes the common opinion, namely that forms of intensive growth are not necessarily safer than those in small households. For example, experts have noted a new practice in intensive pig farming, which increases the risk of disease, compared to small farms. The herds are continuously renewed, by introducing younger specimens, and this procedure makes the swine flu no longer manifest itself seasonally, according to a pattern similar to that manifested in humans. In the case of constantly renewed pig stocks, monitoring shows that the flu exists throughout the year³⁴.

Compans, R., Oldstone, M. (eds), *Current Topics in Microbiology and Immunology*, Tome I, Volume 385, 2014).

³³ Cf. Michael Pollan, *Dilema omnivorului - O istorie naturală despre patru moduri de alimentație* (*The Omnivore's Dilemma: A Natural History of Four Meals*), Romanian version, Publica, 2018, p. 103 sqq.

³⁴ On the one hand, the study shows the potential for transmission from animal to animal, between pigs, is higher in a large farm, with intensive growth, than in a traditional farm. The reason is, of course, the agglomeration of pigs (which facilitates prolonged, frequent contacts). In addition, reducing ventilation and sun exposure can prolong viral viability. This situation increases the likelihood that closed farm workers will be infected with influenza viruses, much faster and more often than in traditional household workers and, of course, much more so than in the case of a person working outside the closed space of the farm, even when exposed to human-to-human influenza. Therefore, the study concludes, pig farm workers should be included in regularly monitored groups during a pandemic of viruses

Another analysis, made for poultry farms, this time in Thailand, showed that intensive poultry production has no lower risk of H5N1 disease compared to small poultry farms³⁵.

In general, in the absence of strict surveillance and regulations, the intensive rearing of birds or animals is a considerable danger of disease for the population³⁶, which is why it is necessary to strictly comply with biosecurity regulations.

in this category, and be included in medical immunization strategies for various occupational categories (Cf. K. P. Myers *et al.*, "Are swine workers in the United States at increased risk of infection with zoonotic influenza virus?", *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*, Volume 42, Issue 1, 2006, pp. 14-20, <https://DOI:10.1086/498977>).

³⁵ An analysis of data from a Thai government investigation indicates that the chances of developing outbreaks and H5N1 infections were significantly higher in large poultry farms, compared to birds raised in small farms. The study has signaled since then that successful strategies for preventing or mitigating the occurrence of pandemic avian flu must take into account the risk factors specific to modern animal production for the food industry (Cf. J. P. Graham *et al.*, "The animal-human interface and infectious disease in industrial food animal production: rethinking biosecurity and biocontainment", *Public Health Reports*, Volume 123, Issue 3, May – June 2008, pp. 282-299. <https://DOI:10.1177/003335490812300309>).

³⁶ Cf. J. H. Leibler *et al.* "Industrial food animal production and global health risks: exploring the ecosystems and economics of avian influenza", *EcoHealth*, Volume 6, Issue 1, 2009, pp. 58-70. <https://DOI:10.1007/s10393-009-0226-0>; J. P. Graham *et al.*, "The animal-human interface and infectious disease in industrial food animal production: rethinking biosecurity and biocontainment", *Public Health Reports*, Volume 123, Issue 3, May – June 2008, pp. 282-299. <https://DOI:10.1177/003335490812300309>; K. L. MacMahon *et al.*, "Protecting poultry workers from exposure to avian influenza viruses", *Public Health Reports*, Volume 123, Issue 3, May – June 2008, pp. 316-322. <https://DOI:10.1177/003335490812300311>; S. S. Lee *et al.*, "Exposure to avian influenza H7N9 in farms and wet markets", *Lancet*, Volume 381, Issue 9880, 25th May 2013, p. 1815. [https://DOI:10.1016/S0140-6736\(13\)60949-6](https://DOI:10.1016/S0140-6736(13)60949-6).

A similar situation is related to the spread of MERS-CoV, where unhealthy eating habits and dangerous practices played an important role. The health authorities then recommended, in order to prevent the spread of MERS, strict regulation of camel movement, regular screening of herds and isolation of infected animals, use of personal protective equipment by camel handlers, as well as the application of rules prohibiting the consumption of unpasteurized camel milk, and urine³⁷.

In 2014, BBC news reported on these recommendations of the Saudi Ministry of Agriculture addressed to people in the regions affected by MERS³⁸. A few days later, the same trust came with evidence showing how the locals defied these recommendations, some people being reported in very close, familiar situations with those animals³⁹.

³⁷ Cf. A. S. Omrani *et al.*, "Middle East respiratory syndrome coronavirus (MERS-CoV): animal to human interaction", *Pathogens and global health*, Volume 109, Issue 8, 2015, pp. 354-362, <https://doi.org/10.1080/20477724.2015.1122852>. WHO recommendations on MERS protection measures also targeted people with diabetes, kidney failure, chronic lung disease and immunocompromised individuals at high risk of MERS-CoV disease. They were strongly advised not to come into contact with camels, not to drink raw camel milk, not to eat meat unless cooked properly, and not to use camel urine (Cf. "Middle East respiratory syndrome coronavirus (MERS-CoV)", 11 March 2019, available online: <https://www.who.int/news-room/fact-sheets/detail/middle-east-respiratory-syndrome-coronavirus-mers-cov>).

³⁸ Cf. "MERS virus: Saudis warned to wear masks near camels", 11 May 2014, available online: <https://www.bbc.com/news/world-middle-east-27362513>.

³⁹ Evidence of defiance of the recommendations emerged shortly after the Saudi authorities recommended safeguards. On 13 May, the BBC also reported, with images, local people embracing camels, asking them, ironically of course, whether they were cold or not, and giving a negative answer. Cf. "Saudi Arabia: Farmers flout MERS warning by kissing camels", 13 May 2014, available online:

From another point of view, alarm signals and warnings issued by specialists fail to convince the authorities so as to introduce specific measures, and these measures are often difficult to design and implement. Here is an example. One year before the world faced the CoVid-19 pandemic, in March 2019, a research study published in *Nature* made a series of remarks on the origin of coronaviruses. Both SARS and MERS, the researchers wrote at the time, are based on easily transmissible and pathogenic viruses (SARS-CoV-1 and MERS-CoV), which, they said, originated in bats. A brief retrospective analysis, made nine months before the general public learned of the existence of the SARS-CoV-2 coronavirus, reviewed the knowledge held by the scientific world about coronaviruses, highlighting their diversity and potential for spreading. The researchers were trying to prove this by discussing the Acute Swine Diarrhea Syndrome (SADS), caused by another coronavirus (SADS-CoV)⁴⁰. Given the current context, the story appears to us particularly significant. It is also the reason why we offer further details.

SADS-CoV first appeared in 2016, in a location 60 miles from Foshan - the place where - in 2002 - SARS first appeared. Initially, it was thought that the deaths of pigs were caused by a known virus, but research led to the identification of a virus of the SARS family, but which had never been seen before. The researchers found that they were dealing with an unknown, completely new disease (then called SADS). This killed more than 24,000 pigs in the region. Testing workers who came in contact with infected animals, the researchers found that the

<https://www.bbc.com/news/blogs-news-from-elsewhere-27393045>.

⁴⁰ Cf. Cui, Jie et al., "Origin and evolution of pathogenic coronaviruses", *Nature reviews. Microbiology*, Volume 17, Issue 3, 2019, pp. 181-192, doi:10.1038/s41579-018-0118-9. SADS-CoV killed 24.000 pigs in four farms in Guangdong, in 2016.

virus was not transmissible to humans. In pigs, SADS-CoV virus affected the gastrointestinal tract. Two years after the advent of SADS, a study published in *Nature* highlighted the importance of identifying coronavirus diversity and their presence in bats, assessing the dangers of future outbreaks that could threaten not only livestock farming, but also public health⁴¹. However, the warnings were not helpful, and we would realise it a little later, in the confrontation with the SARS-CoV-2 virus and the CoVid-19 pandemic.

4.3 Wildlife market. Three examples of impact: bats, pangolins and civets

We have seen that three of the epidemics and pandemics that came into play in the last two decades, MERS, SARS and SARS-2, have as source the bat and a few other mammals, which acted as intermediaries. Well, the same data can be linked to the pandemics we are discussing. How? In regard to these animals, there is evidence that reveals various practices that pose a real danger to humans getting sick.

In fact, it is not just the industry of intensive poultry, animal zootechnics and the improper handling of domestic animals that conceals dangers that can trigger pandemics. Hunting, captive breeding, wildlife trade are also a real danger of pandemic disease. There are many incentives for these practices, such as the use of wild animals in various traditional medical remedies, increasing demand for exotic food in restaurant networks, the growing influx of tourists interested in

⁴¹ Cf. P. Zhou et al., "Fatal swine acute diarrhoea syndrome caused by an HKU2-related coronavirus of bat origin", *Nature*, Volume 556, 12th April 2018, pp. 255-258, <https://doi.org/10.1038/s41586-018-0010-9>.

traditional culinary products. At the same time, these practices hide important vectors for the spread of dangerous viruses.

We shall subsequently make a few remarks about the less known, less regulated, but dangerous wildlife market.

We have seen that, in case of SARS and MERS, research leads to a common source, their origins being attributed to the bat - considered a natural reservoir of coronaviruses. Well, the bat, the palm tree civet (the Indonesian cat to which SARS is linked) and the pangolin (suspected today as an intermediary for SARS-CoV-2) are often used in activities related to the consumer food market. Let us take them one at a time.

Bats

Bats, of course, are the first to be present in this triplet and, as expected, are not missing from the list of wild animals sold. We have seen that they appear in discussion about the origin of the coronaviruses that formed the basis of SARS, MERS and CoVid-19. It must be said that the bat is also present in Ebola⁴², as well as other viruses that cause severe illnesses, such as the Hendra disease (the HeV virus) or Marburg disease (the MVD virus)⁴³.

⁴² Cf. E. M. Leroy *et al.*, "Fruit bats as reservoir of Ebola virus", *Nature*, Volume 438, Issue 7068, 1st December 2005, pp. 575-576. <http://doi:10.1038/438575a>. Ebola broke out in 1976, in Sudan and Zaire, reappearing mainly in two periods, in separate regions, in 1995-2014 and between 2013 and 2016, respectively, in West Africa, but also in 2018 and 2019. The mortality rate is very high, according to various calculations and observations made in different areas, being between 25% and 90%.

⁴³ Cf. M. Schreiber, "A Novel Virus Killed 24,000 Piglets In China. Where Did It Come From?", 4th April 2018, available online: <https://www.npr.org/sections/goatsandsoda/2018/04/04/599179621/a-novel-virus-killed-24-000-piglets-in-china-where-did-it-come-from?t=1591247401612>.

How do bats infect humans? In the cases mentioned here, other intermediate mammals, the camel (MERS-CoV), the palm civet (SARS-CoV-1) or the pangolin most likely intervened⁴⁴. However, there are some aggravating circumstances that need to be mentioned. These are practices that exist in some parts of the world, such as hunting, captive breeding and the marketing of wild specimens. These activities get people, bats, palm tree civets or pangolins close together. It is not difficult to imagine situations, very likely in large markets, where wild species are crammed into cages, close to traders and buyers. These things most likely happen every day, in many places around the world, in large spaces arranged for trade.

Bats are hunted or raised in captivity for meat. Human activity affects at least 167 species (i.e. about 13% of the world's bat species). Such practices are found in Africa, Asia, the islands of Oceania and, to a smaller extent, Central and South America. For this reason, the species are listed in the index of endangered mammals⁴⁵.

There is a large bat market, as well as widespread practice of bat meat consumption in many countries, such as those in Central and West Africa⁴⁶ (for example, more than 100,000 bats

⁴⁴ Cf. W. Ji *et al.*, "Cross-species transmission of the newly identified coronavirus 2019-nCoV", *Journal of Medical Virology*, Volume 92, Issue 4, 22 January 2020, pp. 433-440, <https://doi.org/10.1002/jmv.25682>.

⁴⁵ Cf. Christian C. Voigt, Tigga Kingston (eds.), *Bats in the Anthropocene: Conservation of Bats in a Changing World*, Springer, 2016.

⁴⁶ Cf. T. Mildenstein *et al.*, "Exploitation of Bats for Bushmeat and Medicine", *Bats in the Anthropocene: Conservation of Bats in a Changing World*, Springer, 2016 p. 327, <https://DOI:10.1007/978-3-319-25220-9>, available for free at <https://link.springer.com/book/10.1007/978-3-319-25220-9>.

sold are reported in Ghana alone⁴⁷), but also those in Southeast Asia, such as the Philippines, Indonesia, Malaysia, Thailand or Indonesia⁴⁸. A similar situation regarding the hunt and regular consumption of bat meat is also found in the island states of Oceania, Cook Islands, Guam, Samoa, Fiji, Vanuatu, New Caledonia⁴⁹.

A 2009 meta-analysis, which included more than a hundred studies, reports and articles on bat hunting, consumption and marketing, reviewed all regions where this practice was recorded, lamenting the lack of close monitoring programs⁵⁰.

⁴⁷ Cf. S. O. Ebewore, "Acceptability of Bush Meat as a Source of Animal Protein in Delta State, Nigeria: Implication for Extension Services", *Journal of Northeast Agricultural University* (English Edition), Volume 22, Issue 3, 2015, pp. 67-78, [https://doi.org/10.1016/S1006-8104\(16\)30009-5](https://doi.org/10.1016/S1006-8104(16)30009-5), and T. Mildenstein *et al.*, "Exploitation of Bats for Bushmeat and Medicine", already mentioned.

⁴⁸ For a detailed analysis, see S. Mickleburgh *et al.*, "Bats as bush meat: A global review", *Oryx – The International Journal of Conservation*, Volume 43, Issue 2, 2009, pp. 217-234, <https://DOI.org/10.1017/S0030605308000938>, and T. Mildenstein *et al.*, "Exploitation of Bats for Bush meat and Medicine".

⁴⁹ Information about these countries can be found in S. Mickleburgh, "Bats as bush meat: A global review", *Oryx – The International Journal of Conservation*, Volume 43, Issue 2, 2009, pp. 217-234, <https://DOI.org/10.1017/S0030605308000938>.

⁵⁰ *Ibidem*. The meta-analysis evaluated 119 public texts, in English, with information indicating bat consumption, including 87 specialized papers, seven media reports, three web articles, four university research papers or other manuscripts, as well as nine government reports and 20 NGO reports. The research shows that, in relation to the extent of hunting and consumption of bats, present on a large scale, the specialized analyses are still reduced. Thirty-one studies, apparently comprehensive, on hunting or trading wild meat, the authors assert, do not even mention bats in the list of hunted mammals. Based on the consulted sources, the meta-analysis presents aspects related to hunting, trade and consumption in regions located in Southeast Asia (Indonesia, Myanmar, Malaysia, Papua New Guinea, The Philippines, Thailand, Vietnam), South and East Asia (Bangladesh, China, India and Nepal). Also

This report, issued in 2009, obviously included concern on the possible transfer of pathogens from bats to humans, mentioning an increase in these risks⁵¹.

The pangolin

The pangolin is considered the most trafficked mammal. The February 2014 issue of *Frontiers in Ecology* published an assessment of the fact that, annually, evidence is gathered that more than 10,000 pangolins are victims of wildlife trafficking⁵².

mentioned are the Pacific Islands (American Samoa, Pacific Islands), Solomon, Micronesia, Fiji, Guam, Vanuatu), regions located in the Western Indian Ocean (such as the Republic of Congo, Cameroon, Equatorial Guinea, regions in Sub-Saharan Africa, Gabon, Ethiopia, Mali, Nigeria, Tanzania, Uganda, Zambia or North Africa), South, but also South America (Brazil).

⁵¹ Cf. T. Mildenstein *et al.*, "Exploitation of Bats for Bush meat and Medicine" in *op. cit.* The discovery of asymptomatic Ebola virus infections in three species of pteropods in West Africa is mentioned, infections that, according to the authors, increase the risk of transmission to humans during the time he hunts, raises or prepares meat for consumption. The conclusions of this meta-analysis are important. Finally, the authors recommend the inclusion of bats in general consumption surveys, including the assessment of possible health risks to people consuming bat meat. The need to introduce national legislation to protect bats and establish hunting ban periods, depending on the state of conservation of the species, is also underlined. Mention is also made of the need for educational projects to better inform people on the importance of bats in the economy of biodiversity and forest ecology, in pollination processes and in seed dispersal. Finally, it is recommended to develop community projects aimed at conserving local bat populations and, where possible, capturing limited quotas. (Meta-analysis is also available online at <https://www.cambridge.org/core/journals/oryx/article/bats-as-bushmeat-a-global-review/747260E678F188D0A89E8A6966DEFBA5>).

⁵² Cf. M. Clifton, "Armor is not enough to protect pangolins", *Animals* 24/7, 8th August 2014, available online: <https://www.animals24-7.org/2014/08/08/armor-is-not-enough-to-protect-pangolins/>.

Estimates show a decrease in the population of pangolins by up to 80% in the last twenty years⁵³. There were ten thousands specimens caught, trafficked and killed for trade in China, Malaysia, Hong Kong or Thailand. The solution of some farms for intensive growth of pangolins, experts continue, is not viable, because their breeding rate is very low. This could not meet the demand in the market, so that such farms would most likely fail to stop the actions of illegal hunters, who are attracted to profit. Although, according to an international convention, cross-border trade is prohibited, hunting, raising and killing pangolins is promoted even in some economic forums, being considered a business opportunity. The growing demand on the traditional medicine market, which requires up to 300,000 copies per year, also contributes to this situation. On the other hand, there are significant price increases per kilogram of pangolin meat (from \$ 80 in 2008 to \$ 200 and even \$ 300 per kilogram of live pangolin meat in 2014)⁵⁴.

Other recent reports show confiscations of massive quantities of frozen pangolins on the black market (24 tons from Sumatra, confiscated in Vietnam, but also 14 tons of frozen animals confiscated in Sumatra in 2008 alone, as well as numerous cases of African pangolin confiscated in Asia)⁵⁵.

⁵³ Cf. Oana Bujor, *Pangolinul, cel mai ciudat mamifer de pe pământ (The pangolin, the strangest mammal on earth)*, <https://www.descopera.ro/natura/15751365-pangolinul-cel-mai-ciudat-mamifer-de-pe-pamant-are-limba-mai-lunga-decat-corpul>.

⁵⁴ Cf. Z. M. Zhou, "Scaling up pangolin protection in China", *Frontiers in Ecology and the Environment*, Volume 12, Issue 2, 2014, pp. 97-98. <https://doi.org/10.1890/14.WB.001>.

⁵⁵ "Toothless laws encourage rising demand for Asian pangolins", 14 July 2009, available online: <https://www.traffic.org/publications/reports/proceedings-of-the-workshop-on-trade-and-conservation-of-pangolins-native-to-south-and-southeast-asia/>.

The palm tree civet

The palm tree civet (the Indonesian cat) is also hunted for exploitation in the food industry. Related to it is one of the most expensive coffees in the world that is passed through her intestine. The digestive enzymes that these cats have in their intestines change the structure of the proteins in coffee beans, reducing acidity. A cup of this coffee, considered a delicacy (luwak copia), was sold in 2016 for about 80 USD⁵⁶. Raising civets in captivity, near coffee plantations, for digesting beans, are widespread practices in China, India, from Southeast Asia to Bali and Papua New Guinea, but also in sub-Saharan Africa. There are many testimonies about such plantations⁵⁷. The cages in which the civet specimens are kept have a wire floor, so that the excrement, together with the digested coffee beans, can reach the ground, so that it can be more easily harvested, in order to prepare coffee doses for the general public⁵⁸.

The civets are caught using traps, snails and hunting dogs, methods that often cause them injuries. They are not only kept in the vicinity of coffee plantations, but are often grown far beyond their natural habitat, in noisy markets full of wildlife. Having often a poor diet, and a captive life, intended exclusively

⁵⁶ Cf. R. Bale, "The Disturbing Secret behind the World's Most Expensive Coffee", *National Geographic*, 29 April 2016, available online: <https://www.nationalgeographic.com/news/2016/04/160429-kopi-luwak-captive-civet-coffee-Indonesia/>.

⁵⁷ Cf. "Civettes: ces animaux sacrifiés pour leurs crottes de café", *Fondation 30 millions d'amis*, 1 August 2018, available online: <https://www.30millionsdamis.fr/actualites/article/10778-civettes-ces-animaux-sacrifies-pour-leurs-crottes-de-cafe/>.

⁵⁸ Cf. L. Marie, "These Tiny Creatures are Being Tortured to Produce the World's Most Decadent Cup of Coffee", available online: <https://www.holidogtimes.com/these-tiny-creatures-are-being-tortured-to-produce-the-worlds-most-decadent-cup-of-coffee/>.

for metabolic function, many civets live short, compared to wild specimens⁵⁹.

4.4 Why are bats natural reservoirs of viruses?

We now return, after these brief examples, to bats. We have seen that in the three pandemics in question, SARS, MERS and CoVid-19, but also in the case of the Ebola epidemic, beyond the possible intermediaries, bats play a central role⁶⁰. Researchers have long reported that these mammals have considerable potential to infect the population with dangerous viruses⁶¹. A recent study, for example, analyzed the diversity of the coronaviruses, exploring numerous sites and carriers in twenty countries, to assess the factors that determine viral diversity on a global scale. The results showed that the patterns of CoV diversity are related with those of the diversity of bat species, which reinforces the idea that bats are not only the reservoirs of CoV, but also the ecological engines of their spread. The authors of this study also emphasize the need to explore the

⁵⁹ Cf. "Civet coffee: campaigning for cage-free", *World Animal Protection*, available online: <https://www.worldanimalprotection.org/our-work/animals-wild/civet-coffee-campaigning-cage-free>.

⁶⁰ Research carried out in 2001-2002 revealed Ebola-infected dogs in two regions of Gabon. The research monitored 439 dogs, detecting 15% and 25%, respectively, of the total number of specimens tested as infected, compared to less than 2% (two specimens out of 102 dogs tested) observed in France, the region chosen for comparison being one where there were no cases of Ebola. The researchers conclude in this study that living within communities of humans, dogs infected with the Ebola virus can easily spread the virus among humans (Cf. L. Allela, "Ebola Virus Antibody Prevalence in Dogs and Human Risk", *Emerging Infectious Diseases*, Volume 11, Issue 3, March 2005, pp. 385-390, available online at https://wwwnc.cdc.gov/eid/article/11/3/04-0981_article).

⁶¹ Cf. S. P. Luby, "The pandemic potential of Nipah virus", *Antiviral Research*, Volume 100, Issue 1, 2013, pp. 38-43, <https://DOI.org/10.1016/j.antiviral.2013.07.011>.

diversity of viruses and the importance of these investigations for a proper assessment of the potential risks associated with them⁶².

Given this context, a question inevitably arises: why bats are natural reservoirs of viruses⁶³. Although the whole issue needs numerous investigations, some explanations have been formulated. According to some authors, bats, in fact, the only mammals that fly, collect viruses from large areas where they go. Covering a larger space, through free flight, they come into contact with a richer living world, which means that they can host a large and more diverse number of pathogens⁶⁴. On the other hand, their immune activity is down-regulated, which helps to avoid overreactions, so that viruses become better tolerated in bats than in other mammals⁶⁵. In addition, in the effort to fly, bats have a higher body temperature, having a fever-like state. This means that the pathogens they carry can evolve, becoming more adapted to high body temperatures. This is important because, in our human situation, fever is a common defense mechanism, being a way in which the

⁶² Cf. Simon J. Anthony *et al.*, "Global patterns in coronavirus diversity", *Virus Evolution*, Volume 3, Issue 1, 12 June 2017, vex012, pp. 1-15, <https://doi.org/10.1093/ve/vex012>.

⁶³ Cf. N. Drake, "Why Bats are Such Good Hosts for Ebola and Other Deadly Diseases", *Wired*, 15 October 2014, available online: <https://www.wired.com/2014/10/bats-ebola-disease-reservoir-hosts/>.

⁶⁴ Cf. N. Drake, "Why Bats are Such Good Hosts for Ebola and Other Deadly Diseases", *Wired*, 15 October 2014, available online: <https://www.wired.com/2014/10/bats-ebola-disease-reservoir-hosts/>.

⁶⁵ Cf. D. Davies, "New Coronavirus 'Won't Be the Last' Outbreak to Move from Animal to Human", 5 February 2020, available online: <https://www.npr.org/sections/goatsandsoda/2020/02/05/802938289/new-coronavirus-wont-be-the-last-outbreak-to-move-from-animal-to-human?t=1591006925526>.

environment of our own body becomes less receptive and unfavorable to pathogens. But the virus in the bat, which previously evolved in a warmer environment, will be less affected by a higher temperature⁶⁶.

Hunting and marketing, captive breeding and bat consumption are obviously an important link in the chain linking these mammals to pandemics and epidemics triggered by coronaviruses. In fact, we are dealing with human activities that increase the range of interaction between us and wildlife, increasing the chances of viral transfers from bats to humans and the onset of pandemics.

4.5 Wet Market and Social Inequity. Some Dangerous Aspects

All these situations (involving bats, pangolins and palm civets) are part of an even bigger problem, related to the organization of trade in wild animals. It is a traditional practice not only in Southeast Asia, but also in countries in sub-Saharan and West Africa, as well as in other rural areas around the world. It must be said that in many of the already mentioned countries, the presence of wild animals for sale in public markets is a common occurrence. These situations (involving bats, pangolins and palm civets) are part of an even bigger problem, related to the organization of the trade of wild animals. It is a traditional practice not only in Southeast Asia, but also in countries in sub-Saharan and West Africa, as well as in other rural areas around

⁶⁶ The explanations belong to Andrew Cunningham, professor of epidemiology for wild animals at the Zoological Society of London, in a material provided by CNN (Cf. N. Paton Walsh and V. Cotovio, "Bats are not to blame for coronavirus. Humans are", *CNN*, 20th March 2020, available online: <https://edition.cnn.com/2020/03/19/health/coronavirus-human-actions-intl/index.html>.)

the world. It must be said that in many of the already mentioned countries, wild animal sale in public markets is a common occurrence. In many of these countries, commercial spaces are shared with areas for both household appliances (dry market) and live food (fish species, seafood, etc.), which is usually called the wet market. In turn, the wet market section is divided into two areas, a wet one (intended for the sale of meat, fish and live animals) and a dry one (containing herbs, spices, rice, dried noodles, seafood and beans)⁶⁷. In the wet area, in addition to domestic animals, wild species are also exposed for sale. Careful observers of this cultural phenomenon note that traditional markets are preferred by many consumers, because here they have fresh meat from live animals, offered by small entrepreneurs, a much better meat than frozen products⁶⁸.

⁶⁷ Cf. M. J. Dilonardo, "Understanding the tradition of wet markets", *Mother Nature Network*, accessed on 7th April 2020, <https://www.mnn.com/lifestyle/arts-culture/stories/understanding-chinas-wet-markets>. We also used for study "Wet Market", *New York Times, Travel*, available online: https://archive.nytimes.com/www.nytimes.com/fodors/top/features/travel/destinations/asia/singapore/fdrs_feat_146_12.html?n=Top%252FFeatures%252FTravel%252FDestinations%252FAsia%252FSingapore

⁶⁸ Various newspapers distributed a photo some time ago showing a list of menus available at the wet market in Wuhan, the center of the CoVid-19 outbreak. The list included more than 110 species of animals available for sale. Another significant fact is related to the judicial records which show, as several newspapers claim, that the authorities in Hubei, the province where Wuhan is located, investigated, only in 2019, 250 cases of poaching and trafficking in wild animals. According to local media reports, in 2018, approximately 16,000 animals were hunted and traded in the region. Cf. S. Mcneil *et al.*, (The Associated Press), "China imposes temporary ban on wildlife trade amid coronavirus outbreak", *Global News*, 26th January 2020, available online: <https://globalnews.ca/news/6465547/china-bans-wildlife-trade-coronavirus/>.

However, numerous researches warn that such markets, without close supervision, can be a source of diseases⁶⁹, as it facilitates contact between humans and live animals and the proximity of many species to each other in tight places. The probability of viruses passing from one species to another and the genetic shift we have mentioned is high, increasing the “versatility” of the virus, which can become more adapted to the human body.

In many respects, since the advent of CoVid-19, steps have been taken to diminish the dangers in these markets. Controls and legislation have been tightened and, in some countries, the wet markets have been temporarily closed⁷⁰. However, it is significant, especially in ethical and spiritual terms, that the closure and prohibition of traditional trade in wild animals for

⁶⁹ Cf. Patrick Cy Woo *et al.*, “Infectious diseases emerging from Chinese wet-markets: zoonotic origins of severe respiratory viral infections”, *Current Opinion in Infectious Diseases*, Volume 19, Issue 5, 2006, pp. 401-407, doi:10.1097/01.qco.0000244043.08264.fc.

⁷⁰ In China, for example, a wildlife protection law passed in 1988 and revised in 2016 banned the hunting, killing, sale and purchase of 1,800 rare or endangered animals at the time. The pangolin, for example, is included in this list. However, the laws are still too unclear, and the measures are not too firm. For example, all other wild species that are not on the list can be legally traded. In addition, even though the law has been updated, the list of endangered species has not been updated in the last 30 years, which means that species that have since become rare, endangered, are still unprotected (Cf. S. Mallapaty, “China set to clamp down permanently on wildlife trade in wake of coronavirus”, *Nature*, 21 February 2020, available online: <https://www.nature.com/articles/d41586-020-00499-2>). Shortly after the outbreak of the CoVid-19 pandemic in China, many of the wet markets closed for several months. At the end of April, they reopened, under much stricter control, without areas for wildlife. Trade in wild animals remains banned in China, at least until this text appeared, but this measure is unlikely to stem the illicit trade, trafficking and black market of wildlife.

good is not a viable solution. The reason is simple: hunters and small traders live only on these activities⁷¹.

Here is how a brief analysis of the causes of the pandemic, which at first revealed an irrational, abusive practice on the living world, now highlights a deeper rift. In fact, we deal with poverty and the underdevelopment of large areas, which cause people to do so in order to survive. Those who hunt, coerce, kill or evade the law often do so for their own survival. Both aspects sharply underline the guilty prosperity of civilization. In fact, the standard of living that many of us enjoy stimulates and nurtures abuses of the living world, while at the same time contributing far too little to helping those living in poverty.

Secretly, the two territories of trade in animals and birds are connected: the intensive, consumer-oriented animal zootechnics, tempted to evade bio-security rules, and increasing trade quotas with wildlife and extravagant culinary offerings for tourists. Both are stimulated by consumerist behaviors present among people living in prosperous societies. The statistics show it quite clearly. The civilized world has seen massive increases in meat consumption⁷² over the last fifty years, and this, paradoxically, despite the associated health problems⁷³.

⁷¹ The Executive Secretary of the UN Convention on Biological Diversity, Elizabeth Maruma Mrema, stated that in many rural communities, especially in Africa, people have very low incomes and are strictly dependent on the wildlife trade. Banning this kind of trade would leave a large number of people without a possibility of subsistence and, of course, would increase illegal trade (Cf. P. Greenfield, "Ban wildlife markets to avert pandemics, says UN biodiversity chief", *The Guardian*, 6th April 2020, available online: <https://www.theguardian.com/world/2020/apr/06/ban-live-animal-markets-pandemics-un-biodiversity-chief-age-of-extinction>).

⁷² Cf. N. Alexandratos and J. Bruinsma (Global Perspective Studies Team), *World Agriculture To-wards 2030/2050. The 2012 Revision*, ESA Working

4.6 Far away is much closer. A world without distances

At first sight, in the context of a life spent on the European continent, and in the absence of connections with Asia or Africa, we might consider that what has been said does not make sense. The links presented so far may seem unrealistic or irrelevant, because these problem areas and practices are too far away from us.

It is not so. All that is needed is a small derogation from the established rules for the evil to spread quickly and at great distances. If, in a few far away farms in some unknown city, the biosecurity rules are violated, if for the reduction of expenses, the fans are not turned on or the cleaning of the floors is not done periodically, if something like this happens, the birds and workers nearby will get sick. In turn, infected workers can spread viruses in the cities, given that, in reality, many animal zootechnics units are located, as we said, near urban areas⁷⁴.

From here, there is only one step to the other end of the world. Unlike in the past, when “human provincialism was the guardian of pandemics”⁷⁵, nowadays, diseases travel quickly and far, far beyond the patient (the “zero patient”). Once in the cities, the viruses spread quickly, no matter how far, into the

Paper no. 12-03, June 2012, available online: <http://www.fao.org/3/a-ap106e.pdf>.

⁷³ Cf. H. Charles, “Meat consumption, health, and the environment”, *Science*, Volume 361, Issue 6399, 20 July 2018, pp. 1-8, available online at <https://science.sciencemag.org/content/361/6399/eaam5324/tab-pdf>. After these remarks, we shall see that, in the light of Christian spirituality, many other paradoxical aspects of life prove, to a certain extent, inevitable and that, whether we want it or not, they characterize us.

⁷⁴ They are often located so as to make it easier for employees to access the service, but also for the transport of goods to the sales units.

⁷⁵ Cf. David Wallace-Wells, *Pământul nelocuibil. Viața după încălzirea globală* (*The Uninhabitable Earth. Life after Warming*), Romanian version, Bucharest: Litera, 2019, p. 115.

hyper-connected globalism of the world. The present day civilization invents, stimulates and feeds itself on our residential, professional and tourist mobility, through its huge air and land transport networks.

The pandemic we are going through now proves this to us: inappropriate practice with the species of the living world, occurring far from us, spreads its consequences very quickly, to the yard of our house. The disease can spread everywhere, because patients and spoiled goods can travel everywhere, and in the case of respiratory diseases, which are transmitted very easily, this spread is considerably multiplied.

Therefore, the global movement of food, goods and people exposes us to all these dangers. We do not believe that we need to discuss statistics that show the huge increase in the number of passengers (passengers in trains, personal cars and, especially, in airplanes), all over the globe⁷⁶. Therefore, even if we do not live near an intensive pig and poultry farm that violates the rules of hygiene, and even if we do not travel to sub-Saharan Africa or China, to taste the traditional menu offered by those wonderful exotic places, we are, exposed to the effects of these practices because we live in close contact with all these distances of the world.

There is, however, a first precious spiritual meaning, namely that everything we do, whether heroic deed, sacrifice, endeavor for holiness or passionate thing, affects, in one way or another, everyone else, reaching the whole human nature and the world

⁷⁶ Some estimates indicate a total of 4.5 billion passengers in 2009, 5 billion in 2010, over 6 billion in 2014, over 7 billion passengers in 2017, appreciating an annual increase of 7% (Cf. "The World of Air Transport in 2018", ICAO. *Uniting Aviation*, available online: <https://www.icao.int/annual-report-2018/Pages/the-world-of-air-transport-in-2018.aspx>).

around. The spiritual man is revealed to us here, through the care he manifests for all, through the way he takes everything into account and through the openness with which he embraces all people, embracing all the others in his prayer. The spiritual man is the person with a wide sensitivity, willing to suffer for his fellow men and for nature, rather than to enslave them. At the opposite end, the passionate one forces them all, as he pleases.

5 Covid-19 pandemic, conspiracies and conspiracy theories. Some interdisciplinary considerations

5.1 The history, scientific research and conspiracy of CoVid-19

It is important to revisit the problem of the conspiracy theory. After everything we have discussed, we can re-discuss - from a different perspective - the danger of accepting, without critical thinking, conspiracy theories, as explanations for what we live now. Is it worth considering CoVid-19 the result of an artificially made virus? If everything was ordered by a secret group, then how could all the other viruses and pandemics of the last century be explained? Would it be fair to take into account the fact that mankind regularly faces such epidemics and try to see other deeper causes? Is it worth looking for a link between all these events, given the frequency with which they occur, their similar mechanisms and their common origins? Could there be more hidden causes that trigger them over and over again? If so, then it would not be just CoVid-19, but we would be dealing with a broader situation, closely linked to the world and the life we live.

In fact, it is useful to place events in a broader historical context and in connection with each other. In addition to recent history, that, in several regards, leaves the conspiracy theory without

object, the manner in which these conspiracy theories emerge suggests at least two topics for reflection: one concerns the instability of these constructions, and the other concerns something somewhat unexpected, namely the susceptibility of a significant portion of the general public to these theories, despite their subterfuge.

At the beginning of the pandemic, the research on the origin of SARS-CoV-2 coronavirus could not be conclusive, well done, given the short period of time and the few available data on SARS-CoV-2. Therefore, the few results that emerged did not have much solid ground, sparking debates and controversies. We shall briefly mention some aspects regarding the basis of some of the conspiracy theories that targeted the origin of the pandemic, indicating some of the results that later refuted this idea. A significant aspect, in the conspiracy theories on SARS-CoV-2, is a study published at the end of January. It is a material made by several Indian researchers, posted on the 31st January, 2020 on a website for pre-print articles⁷⁷. The material fueled suspicion, as the authors then launched the idea that SARS-CoV-2 bears similarities to another virus that has caused much damage in the recent history of medicine, HIV-1. They reached this conclusion after comparing the proteins present in the spike formations with which SARS-CoV-2 attaches to cell membranes to enter mammalian cells with some HIV-1 sequences. In the article, the authors claimed that they managed to identify 4 unique fragments, present only in SARS-CoV-2, not in other coronaviruses, which had an “identity /

⁷⁷ Cf. P. Pradhan *et al.*, “Uncanny similarity of unique inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag”, *bioRxiv - The Preprint server for Biology*, 2020.01.30.927871 (31st January 2020), <https://www.biorxiv.org/content/10.1101/2020.01.30.927871v1>.

similarity” with certain sequences of the HIV-1 virus. These observations were used as support for the claim that SARS-CoV-2 was unlikely to have occurred naturally⁷⁸. Two days later, on the 2nd February 2, after several critical reactions from the scientific community, which highlighted the lack of conclusive evidence, the article was withdrawn⁷⁹. However, the idea put forth there began to circulate on social networks and in the virtual space.

A similar opinion was found a few months later, in a study by virologist Luc Montagnier. This time, the situation is significantly different, because the voice belongs to a Nobel Prize winner for Medicine (2008), a personality who has made decisive contributions in the fight against acquired immunodeficiency virus (HIV). Montagnier argued in an interview on the 17th April, 2020, that human manipulation is likely to be the source of SARS-CoV-2. He claimed then that, through meticulous work, molecular biologists inserted into the SARS-CoV-2 coronavirus, sequences from the RNA present in HIV⁸⁰, with the intention of creating a situation that would speed up the obtaining of a vaccine against AIDS. Montagnier’s position, a strong voice in virology, has been a much stronger source in support of conspiracy theories for several weeks.

Meanwhile, the scientific world had nothing consistent regarding SARS-CoV-2. It was rather an unclear situation regarding the structure and origin of the virus. Bats were thought to be the original source, but nothing was known about

⁷⁸ Ibidem.

⁷⁹ Ibidem.

⁸⁰ Cf. Geoffroy Clavel, “Luc Montagnier, prix Nobel controversé, accuse des biologistes d’avoir créé le coronavirus”, *Science*, 17th April 2020, https://www.huffingtonpost.fr/entry/luc-montagnier-le-controverse-prix-nobel-accuse-des-biologistes-davoir-cree-le-coronavirus_fr_5e998515c5b63639081cceb6c.

the intermediate being that facilitated the transfer of SARS-CoV-2 to humans. In this regard, for example, the idea that snakes are the ones who transferred the virus from bats to humans has been advanced. Based on some analyses, a research supported the idea that two very poisonous species of snakes, *Bungarus multicinctus* and *Naja atra* or *Chinese cobra*⁸¹, were the link. At the same time, the idea that the pangolin could be an intermediary started to spread, but providing clear scientific evidence required more time. The general public, however, often proves unprepared to wait for such evidence for a long time, so that, in search of explanations for the whole situation, they readily accept the explanations of conspiracy theories. Gradually, however, various issues concerning SARS-CoV-2 began to emerge. Careful genetic research and laboratory explorations have argued the idea of an artificial manufacture of the virus. A first reply was published by the European Scientist, just one day after the statement of the Nobel laureate, Luc Montagnier⁸². Genetic analysis, he asserts, shows that there are no similar sequences in SARS-CoV-2 and HIV-1⁸³.

⁸¹ Cf. W. Ji *et al.*, "Cross-species transmission of the newly identified coronavirus 2019-nCoV", *Journal of Medical Virology*, Volume 92, Issue 4, Special Issue: 2019 Novel Coronavirus Origin, Evolution, Disease, Biology and Epidemiology: Part I, April 2020, pp. 433-440.

⁸² Cf. P. Lacoude, "No, SARS-CoV-2 does not contain HIV genetic code!", *European Scientist*, 18 April 2020, available online at <https://www.europeanscientist.com/en/big-data/no-sars-cov-2-does-not-contain-hiv-genetic-code/>.

⁸³ Similarities, but not identical structures, are present only at the level of lipid structures, present in the of envelop of the virus, structures that are present in other older viral formations, some known since the '50s, such as coronaviruses 229E and OC43 which are responsible for some forms of influenza (Cf. Philippe Lacoude, "No, SARS-CoV-2 does not contain HIV genetic code!", *European Scientist*).

Another study also rejects the idea that the new coronavirus has structures similar to HIV, and proposes the pangolin (*manis javanica*) as an intermediary in the transfer from bats to humans⁸⁴. This research, through more accurate methods (more extensive data, newer and more accurate bioinformatics methods and databases), showed that the four segments that seemed specific to SARS-CoV-2, considered to have similarities to HIV-1, can be found in other viruses, including some types of coronavirus in bats.

On the other hand, the analysis also clarified some important issues regarding the intermediary, which allowed the transfer from bats to humans. The authors found an error in the previous analysis that suggested snakes as an intermediate host. In fact, some protein sequences present in the lungs of diseased pangolins have a higher degree of similarity, of 91%, with the proteins of the human virus SARS-CoV-2. Also, the binding formations (through which the virus attaches to cell membranes, in ACE2 receptors), the spike protein from the coronavirus taken from pangolin tissue, show only five differences compared to SARS-CoV-2 virus, compared to no less than 19 differences between human viral proteins and those present in bats. Therefore, the pangolin seems to be a close host to the SARS-CoV-2 form that has reached us. The evidence provided by this study therefore indicates that the new coronavirus that caused the Covid-19 pandemic came from the bat, and most likely had the pangolin as an intermediary in human transfer⁸⁵.

⁸⁴ Cf. C. Zhang et al, "Protein Structure and Sequence Reanalysis of 2019-nCoV Genome Refutes Snakes as Its Intermediate Host and the Unique Similarity between Its Spike Protein Insertions and HIV-1", *Journal of Proteome Research*, Volume 19, Issue 4, March 2020; pp. 1351-1360. DOI: <http://10.1021/acs.jproteome.0c00129>.

⁸⁵ Ibidem.

Evidence of the possible origin of SARS-CoV-2 continued. On the 10th May, *Current Biology* published another study, this time presenting another coronavirus identified in bats, which allows important conclusions about the Covid-19 pandemic virus. The researchers presented the RmYN02 virus, which - at least in terms of genome sequences - could be considered a very close relative of the SARS-CoV-2 virus. In the case of this RmYN02 virus, they identified structures similar to those that were even the subject of speculation regarding the artificial realization of the SARS-CoV-2 virus. These are some similar sequences, which, according to the study, also exist in other viruses present in bats. This fact supports precisely the possibility of the natural appearance of these structures in the evolution of the coronavirus, in opposition to the way they were suspected in conspiracy theories, i.e. being considered strictly artificial, made by human intervention. In this way, the study concludes, the idea that SARS-CoV-2, which has RmYN02-like structures, could occur naturally is more palpable⁸⁶.

Further research was previously published in the prestigious journal *Nature*, which shows, through genetic study, that SARS-CoV-2 is not artificial⁸⁷. In addition, there are other research studies published in specialized journals, which also support, with various evidences, the natural origin of the virus⁸⁸. The

⁸⁶ Cf. H. Zhou *et al.*, "A novel bat coronavirus closely related to SARS-CoV-2 contains natural insertions at the S1/S2 cleavage site of the spike protein", *Current Biology*, 8 June 2020, pp. 1-8, DOI: <http://10.1016/j.cub.2020.05.023>.

⁸⁷ Andersen, K. G. *et al.*, "The proximal origin of SARS-CoV-2", *Nature Medicine* 26, 17 March 2020, pp. 450-452, <https://DOI.org/10.1038/s41591-020-0820-9>.

⁸⁸ Here are some studies that support the natural origin of the virus: SARS-CoV-2: P. Zhou *et al.*, "A pneumonia outbreak associated with a

latest study on this topic, at the time of this research study,

new coronavirus of probable bat origin", *Nature*, vol. 579, no. 7798, 2020, pp. 270-273, <http://10.1038/s41586-020-2012-7>; R. Lu *et al.*, "Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding", *Lancet*, nr. 395, 2020, pp. 565-574, [https://doi.org/10.1016/S0140-6736\(20\)30251-8](https://doi.org/10.1016/S0140-6736(20)30251-8), available online: [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(20\)30251-8.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(20)30251-8.pdf); Zhu N *et al.*, "A Novel Coronavirus from Patients with Pneumonia in China", *The New England Journal of Medicine*, Volume 382, Issue 8, 2020, pp. 727-733, doi: <http://10.1056/NEJMoa2001017>, available online: https://www.nejm.org/doi/10.1056/NEJMoa2001017?url_ver=Z39.88-2003&rft_id=ori%3Arid%3Acrossref.org&rft_dat=cr_pub++0www.ncbi.nlm.nih.gov; L-L. Ren *et al.*, "Identification of a novel coronavirus causing severe pneumonia in human", *Chinese Medical Journal*, Volume 133, Issue 9, May 5, 2020, pp. 1015-1024, doi: 10.1097/CM9.0000000000000722; D. Paraskevis *et al.*, "Full-genome evolutionary analysis of the novel corona virus (2019-nCoV) rejects the hypothesis of emergence as a result of a recent recombination event", *Infection, Genetics and Evolution*, Volume 79, 2020, 104212, pp. 1-3, <https://doi.org/10.1016/j.meegid.2020.104212>; D. Benvenuto *et al.*, "The 2019-new coronavirus epidemic: evidence for virus evolution", *Journal for Medical Virology*, Volume 92, Issue 4, 2020, pp. 455-459, available online: <https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.25688>; Y. Wan *et al.*, "Receptor recognition by novel coronavirus from Wuhan: an analysis based on decade-long structural studies of SARS", *Journal of Virology*, Volume 94, Issue 7, 17 March 2020, pp. 1-9, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7081895/pdf/VI.00127-20.pdf>; "Coronavirus disease 2019 (COVID-19) situation summary", US Center for Disease Control and Prevention, available at <https://www.cdc.gov/coronavirus/2019-nCoV/summary.html> (16 February 16, 2020). All these studies are mentioned in correspondence signed by several authors, published by the prestigious *The Lancet* (Cf. "Statement in support of the scientists, public health professionals, and medical professionals of China combatting COVID-19", Correspondence, Volume 395, Issue 10226, E42-E43, 7 March 2020. The text is signed by 27 de authors. See [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30418-9/fulltext#coronavirus-linkback-header](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30418-9/fulltext#coronavirus-linkback-header)).

managed to shed more light on the origin of SARS-CoV-2 and its adaptive capabilities. The differences between the structure of SARS-CoV-2 as present in humans and the forms existing in bats and pangolins are explained. Although more and more researchers agree that the virus originated from bats and was transmitted to humans through pangolins, the evidence is not entirely satisfactory, as there are important differences between SARS-CoV-2 and its related forms present in the two mammals. In other words, pangolin coronaviruses are still too different from SARS-CoV-2 for the latter to be considered an intermediary for the current pandemic. The study, which was recently published, sheds some light on this issue. SARS-CoV-2 has a special ability to retrieve information that gives it access to new host cells, which may explain the differences between the three viruses, but also the ease with which it passes from animals to humans. Researchers say that the virus has an efficient mechanism for copying that "key" that unlocks the "gateway" into the host cells, in the case of CoVid-19 the host being the human cell. In SARS-CoV-2, the "key" is the spike protein on the surface of the virus, used as a method of attachment to the membrane of the cells into which the virus enters. In the case of SARS, the researchers say, the virus passed from bats to civets, while in the case of MERS the coronavirus made a transfer from bats to camels, eventually reaching, in both cases, the humans. In the case of CoVid-19, SARS-CoV-2 underwent evolutionary changes (repeated genetic reassortments), allowing it to enter the human cell more efficiently⁸⁹. Other experts in the field have also expressed their views, supporting the idea of the natural origin of the virus⁹⁰.

⁸⁹ In fact, the binding formation of the viral ancestor present in bats (the

spike protein) is very different from that of the CoVid-19 virus and cannot effectively infect human cells. And, as SARS-CoV-2, the virus that evolved from the ancestor present in the bat, attaches effectively to the human cell membrane, it is clear that we are dealing with an adapted virus. On the other hand, there are areas of the human virus of CoVid-19 disease that show a very high degree of similarity (in terms of amino acid sequences) with the sequences present in the bat and pangolin viruses. This strongly suggests that all these viruses are part of the same family, but that they also have structures that allow them to adapt, moving very efficiently from bats to pangolins and then from pangolins to human beings. Given the adaptability of the bat viral ancestor, the SARS-CoV-2 found in human beings appears to be a hybrid that has incorporated binding "keys" to enter cells. This shows that SARS-CoV-2 has a rich evolutionary history, which included several genetic rearrangements, allowed by the body of the bats and of the pangolins, thereby strengthening its ability to be transmitted to humans (Cf. X. Li, et al., "Emergence of SARS-CoV-2 through recombination and strong purifying selection", *Science Advances*, 29 May 2020, pp. 1-14: eabb9153. DOI: 10.1126/sciadv.abb9153. The material is also summarized in *Science daily*, "Evolution of pandemic coronavirus outlines path from animals to humans. The ability of the virus to change makes it likely that new human coronaviruses will arise", available online, May 29th 2020:

<https://www.sciencedaily.com/releases/2020/05/200529161221.htm>).

- ⁹⁰ "There is no evidence that SARS-CoV-2, the virus that causes CoVid-19 in humans, originated in a laboratory in Wuhan. Coronaviruses such as SARS-CoV-2 are common in wildlife species and are common in new hosts. This is also the most likely explanation for the origin of SARS-CoV-2. The closest known relative of SARS-CoV-2 is a bat virus called RaTG13, which has been kept at the Wuhan Institute of Virology. There is some unfounded speculation that this virus was the origin of SARS-CoV-2. In any case: (i) RaTG13 was taken from another province in China (Yunnan) to the place where CoVid-19 first appeared and (ii) the level of genome sequence divergence between SARS-CoV-2 and RaTG13 is equivalent to an average of fifty years (and at least twenty years) of evolutionary change. Therefore, SARS-CoV-2 was not derived from RaTG13. In addition, we know that SARS-CoV-2-associated viruses are also found in the pangolin. This suggests that other wildlife species are likely to be related to SARS-CoV-2. To summarize, the abundance, diversity and evolution of coronaviruses in wildlife strongly suggest that SARS-CoV-2 is of natural origin. However, greater sampling of wildlife

5.2 Scientific endeavours: great efforts for the first small certainties

In order to be able to go further, some issues that concern the scientific evidence of the scenario of the outbreak and natural spread of the SARS-CoV-2 virus need to be made clear. First of all, it must be acknowledged that, despite what has been presented so far, in a strictly scientific way, we do not yet have a fully satisfactory explanation, which would undoubtedly show the natural origin of SARS-CoV-2. The proofs that have been provided so far, although credible, are still partial. The opinions of some scholars review the insufficiently clarified or doubtful aspects of the problem.

We should highlight, for example, the fact that the evidence gathered so far about the emergence of SARS-CoV-2 in Wuhan markets is not strong enough to convince everyone. We provide an example here. There is a research study indicating that, dealing with a virus that registers rapid mutations, tracing the initial moment, the outbreak of the virus and the stages of its geographical spread, raises great difficulties. Researchers in Cambridge (UK) and Germany have attempted such a

species, including bats in Hubei Province, is needed to determine the exact origins of SARS-CoV-2" (Edward Holmes, ARC Australian Laureate Fellow, Sydney Medical School, member of Marie Bashir Institute for Infectious Diseases and Biosecurity, member of Charles Perkins Centre, member of The Australian Academy of Sciences member of The Royal Society). However, there are other similar statements from other specialists in the field, from various countries: Nigel McMillan, Director of Infectious Diseases and Immunology at Menzies Health Institute Queensland, Griffith University, Professor Nikolai Petrovsky, College of Medicine and Public Health at Flinders University, research manager at Vaxine Pty Ltd. (The statements are public: <https://www.scimex.org/newsfeed/expert-reaction-did-covid-19-come-from-a-lab-in-wuhan>).

reconstruction to early reconstruct the SARS-CoV-2 "evolutionary pathways" using genetic mapping techniques⁹¹.

The results suggest that the type of SARS-CoV-2 that is the closest to that found in bats - the "A" type, "the original genome of the human virus" - was present in Wuhan, but, surprisingly, it was not the predominant type of virus of the city! Of course, this result is not exempt from accuracy limitations either. On the one hand, the obtained viral network details the early stages of a pandemic, before the evolutionary pathways of COVID-19 become agglomerated by the large number of SARS-CoV-2 mutations. In general, rapid mutations pose great difficulties in accurately understanding the SARS-CoV-2 family tree. In fact, the the research is rather uncommon, because the algorithms are commonly used in mapping the movements of

⁹¹ There is a genetic analysis of 160 genomes of the virus from human patients, taken from around the world between December 24, 2019 and March 4, 2020. The research revealed three distinct "versions" of SARS-CoV-2 and three viral lines / routes of their distribution, which provided a kind of mapping of the spread of the new coronavirus and the mutations it underwent. The "A" type, the closest link to the virus found in both bats and pangolins, is described, significantly for the present discussion, as the "root of the outbreak" by researchers. Type "B" is derived from type "A", being separated by two mutations, while type "C" is in turn derived from type "B". The results suggest that the SARS-CoV-2 virus present in Wuhan, called "B", was predominant in East Asian patients, but that this variant may not have traveled far beyond the region. The "C" version of the virus is the main European type, found in early patients in France, Italy, Sweden and England. Although missing from the mainland Chinese sample, it is found in Singapore, Hong Kong and South Korea. The analysis also suggests that the first outbreaks of the virus in Italy may be related to the one reported in Germany on January 27, and that another route of infection of the Italian population may have been related to Singapore (Cf. Peter Forster et al., „Phylogenetic network analysis of SARS-CoV-2 genomes”, *Proceedings of the National Academy of Sciences – PNAS*, Volume 117, no. 17, 23rd April, 2020, pp. 9241-9243, <https://doi.org/10.1073/pnas.2004999117>).

the human population in distant historical periods, through DNA investigations. Although, the research is among the first to apply this method to viruses, structures that possess only fragments of genetic material, it managed to provide important observations on the routes of the SARS-CoV-2 infection and spread. However, these clarification efforts continue. Since the first analysis published in PNAS, the research team has expanded its research to 1,001 viral genomes, meanwhile the results show that the first SARS-CoV-2 infection and its spread occurred between mid-September and early December 2020⁹². There are other situations that warn us that, at this point, we can say that the origin of SARS-CoV-2, although apparently most likely natural, it is still overshadowed with uncertainties. In this regard, one may find that the uncertainty, the absence of an explanation for a phenomenon that affects us, makes us tense, irritates, even stresses us. In times like these, the effects of this could be easily seen, because, in addition to the hunger for certainty that characterizes the human mind, there are also the uncertainties and fears generated by CoVid-19⁹³.

⁹² Cf. Peter Forster et al., „Phylogenetic network analysis of SARS-CoV-2 genomes”, *Proceedings of the National Academy of Sciences – PNAS*, Volume 117, no. 17, 23rd April, 2020, pp. 9241-9243, <https://doi.org/10.1073/pnas.2004999117>.

⁹³ Somehow, our minds look for certainties because they put us at ease. A definite answer closes a problem, solves a dilemma, puts a lid over the dizzying whirlwind of excruciating questions. A clear explanation relieves the spirit of the burden of searching and the anxiety generated by the absence of an answer. On the other hand, Christian spirituality glimpses at something deeper here. In the human efforts to find more and more comprehensive explanations for events that raise questions, but also in the habit of the mind to prefer explanatory narratives, Christianity perceives the divine imprint of the human spirit: we move throughout our whole life within a reality and through the universe of intelligible contents, seeking meanings and reasons, because we live

Secondly, it must be said that for someone used to the history of science, with its complicated procedures that are mandatory for the certification of its findings, the situation is not new. The dynamics of science show us that, in general, establishing various certainties – that are, most often, precise, restricted – about large and complex phenomena, follows a winding path and requires a huge collective effort. Many details of the causal hypotheses must be verified, the outline of a reliable explanation being difficult and fragmented. The path of science is rather winding, having no conditions to offer, in a reasonable manner, well-founded and comprehensive explanations about events that are complex and far-reaching. Gathering evidence on the natural origin of the SARS-CoV-2 virus is no exception. When will it be certain that the virus emerged naturally? Who can answer this question? In any case, such a result is possible at the end of a road that can already be foreseen as difficult (we shall provide some samples of this path, as well). However, other evidence is needed, other refined research studies, which are not going to avoid discussions. On the other hand, the dynamics of the genetic structure, the adaptability of the virus to the host cells make the process of obtaining absolutely clear

with this deep conviction that they do exist. We believe that the world, life or existence do not roll within the species of the absurd. Finally, we think that everything makes sense. Christian theology and the light of the true faith foresee, in all these searches, man's need for God. Therefore, the fulfillment of all human pursuits, is He, Christ, the Son of God made man. He is the Way, the Truth and the Life (John 14: 6). He is the Way that leads to the Truth, He is the Truth that fully edifies and restores man's life. His life is our full life. Therefore, for a Christian who is going through a difficult period of trials and confusion, the necessary interval to outline a satisfactory explanation for those events is not dominated by panic or fear. Hope in God's care, in the divine grace gives to the faithful calm hope and light, elements that weigh the emotions, ensuring a more lucid reception of events.

evidence regarding the natural origin extremely difficult, if not impossible.

We can provide a relevant example in this regard. It was only 15 years after the confrontation with SARS that the complete elucidation of the origin of SARS was achieved. Although, in 2002 – 2003, there were voices supporting the idea that the virus was artificially created, the researchers were able to find very strong evidence to support the natural origin of the SARS virus. After numerous explorations, they identified a population of bats in a cave in China, bats that possessed all the fragments of genetic material present in the SARS-CoV-1 virus that caused SARS⁹⁴. But this strong evidence required 15 years of exploration. Still, they failed to clarify all aspects⁹⁵.

⁹⁴ It is a remote cave in Yunnan Province, where researchers have identified a single population of horseshoe bats that have virus strains with all the genetic components of the virus present in humans in 2002. Moreover, genetically similar viruses have been identified in the masked palm civets (*Paguma larvata*), sold in animal markets in Guangdong. Long after the outbreak of SARS, numerous studies have identified SARS-related coronaviruses in Chinese horseshoe bats (*Rhinolophus*) 2. However, in the case of SARS, as in the case of SARS-CoV-2, certain key genes in SARS-CoV-1 - which are linked to a protein that allows the virus to attach and infect cells - showed differences in the two versions - that of the virus present in humans and that of the bat virus. These differences also fueled doubts about the natural origin of SARS-CoV-1 and SARS. The findings about SARS suggested that the SARS-CoV-1 virus had the probable origin in bats, moving to civets before reaching humans. However, in the case of SARS, as in the case of SARS-CoV-2, certain key genes in SARS-CoV-1 - which are linked to a protein that allows the virus to attach and infect cells - showed differences in the two types - that of the virus present in humans and that of the bat virus. These differences also fueled doubts about the natural origin of SARS-CoV-1 and SARS. After taking thousands of samples from several locations across the country, the researchers found a special cave in Yunnan (southwest China) where bats carried coronaviruses that bore important similarities to the human version of

Therefore, this unclear situation doesn't mean only important scientific tasks - for those who choose to research the phenomenon. It is clear that, even for those who want to understand these discoveries, who are searching for an explanation of the whole pandemic, the acquisition of those explanations as such involves a significant cognitive burden. Let us conclude here that the effort of scientific research, which aims at the discoveries in the laboratory and, on the other hand, their understanding at the level of the general public, by non-specialists, place double pressure, allowing only slow progress,

SARS-CoV-1. After five years of monitoring the bat species that lived in this cave, and after a thorough analysis of the genetic material of 15 viral strains from bats, it was found that, taken together, the strains present in those bats contain all the genetic parts that make up the human version and SARS-CoV-1. Even if no specimen of bat had - entirely and alone - the strain SARS-CoV-1, with all the genetic sequences of the one found in humans, the analysis was extraordinary, identifying all these sequences in the bat population of this cave, because, as the study mentions, the stems often blend. (Cf. Ben Hu et al., "Discovery of a rich gene pool of bat SARS-related coronaviruses provides new insights into the origin of SARS coronavirus", *PLOS Pathogens*, 30 November, 2017, pp. 1-27,

<https://doi.org/10.1371/journal.ppat.1006698>. For an excellent brief presentation of this result, see David Cyranoski, "Bat cave solves mystery of deadly SARS virus" - and suggests new outbreak could occur. Chinese scientists find all the genetic building blocks of SARS in a single population of horseshoe bats, in *Nature*, Volume 552, 2017, pp. 15-16. doi:10.1038/d41586-017-07766-9, available online at <https://media.nature.com/original/magazine-assets/d41586-017-07766-9/d41586-017-07766-9.pdf>).

- ⁹⁵ As the researchers assert, the results obtained in this study are only "99%" convincing. Demonstrations that show concretely that a SARS strain can jump from bats to another animal, such as the civet, and then infect humans, would be ideal here. At the same time, as the authors state, the research has not clarified other issues, which still remain unexplained. It is not clear, for example, how the virus in bats in Yunnan occurred in animals and humans living 1,000 kilometers away, in Guangdong Province, without any cases reported in Yunnan Province, where it existed.

and offering, most of the time, explanations that are rather difficult to understand.

Finally, the last remark regards an expected comparison. In relation to this meticulous construction of scientific narratives, the conspiracy theory presents an enviable suppleness; it has simple joints (two, three inferences), it is effective, as words that hold attention, with a strong emotional load (global danger, end of the world, lie of the century, loss of freedoms, attack on human security) accompany it. Also, it requires no effort of understanding, reaching us in accessible forms (video editing, of a few minutes and with short statements).

Why are all these remarks valuable? They highlight the way that, in a hurry and due to lack of evidence, we can build or support various falsehoods, conspiracy theories. Furthermore, the adoption of a conspiracy theory can affect, in the long run, our perception and the way we relate to the world, since what we claim at one point is not eagerly or easily abandoned. In fact, as soon as facts that seem to contradict what we strongly support emerge, we will tend to harmonize old beliefs with their opposing evidence to eliminate the discomfort. The drive towards not giving up on our convictions, through various strategies and interpretative constructs, called cognitive dissonance has long been identified and studied in psychology⁹⁶. Here, in fact, we receive a warning about the flawed way of embracing an explanation, developing a certain resistance to changing the perspective, in the face of all the facts and empirical evidence that contradict us.

However, an analysis on the presence and relating to conspiracy theories is also important because it can reveal

⁹⁶ The theory was developed by Leon Festinger. The reference study is *A Theory of Cognitive Dissonance*, Stanford University Press, 1957.

spiritual aspects, useful meanings that are relevant in the current situation. In regard to the way in which conspiracy theories can distort the perception of reality, preventing the spiritual capitalization of the context of life, there are many aspects that would be worth analyzing. This is not the best place for a thorough analysis. Therefore, below, we shall limit ourselves to three basic observations.

5.3 Conspiracies and conspiracy theories: history and present, reality and fictional inflation

Let us start with a clear statement: we do not support the idea that conspiracy theories must be all rejected; we do not believe they are baseless. Historical data from either the distant or recent past would unequivocally contradict such an uncompromising position. In fact, in many cases, the situation is rather the opposite. History contains an impressive inventory of important events whose course has been dramatically influenced by conspiracies, assassinations or secret alliances. Research has revealed many such conspiracies. On the other hand, a whole series of journalistic investigations, press revelations, extensive investigations or resounding trials have shown the general public that such things, perhaps with a slightly changed physiognomy, occur even today. The recent past is no stranger to disguised activities, secret military interventions, sabotage activities, systematic and extensive attempts to evade laws and the rule of law. Such actions, carried out by organized groups, by secret alliances involving states or corporations, have often managed to interfere with ordinary democratic processes, destabilizing the rule of law, removing important and uncomfortable figures from the stage of life, sometimes changing the political configuration of regions or successfully hindering, even for decades, the development of nations.

As long as, by its definition, conspiracy represents "a secret plan by a group of people to do something harmful or illegal"⁹⁷, all those situations in the distant past, in recent history or in the present - in which the course of the events is influenced by secret actions, unknown to the general public, fall within the scope of conspiracies and must be considered as such⁹⁸. It is

⁹⁷ The definition of "conspiracy" in: *Oxford Learner's Dictionary*, <https://www.oxfordlearnersdictionaries.com/definition/english/conspiracy>.

⁹⁸ Here is not the appropriate place to develop this subject, but we have to support our statements with examples. Here are some of the most known scandals of the recent past and present that got the public attention: the *Watergate* scandal (1972), the global surveillance programs, revealed by Edward Snowden, with the secret agreement of the telecommunications companies (2013), the *Dieseltgate* scandal (2015), the Cambridge Facebook-Analytics scandal (2017), the cyber-propaganda of the *fake-news* (2017). We must not overlook those secret actions aimed at weakening the political capital of the opposition, in various countries, through threats or fakes, the economic espionage or sabotage or all those secret strategies aimed at destabilizing the rule of law, the criminal organizations, networks, the corrupt practices or illegal business. They all can affect, more or less, the rule of law, the economy and the lives of citizens. Even if not all of them fit perfectly into the definition of conspiracy, a certain resemblance with them cannot be denied. Unfortunately, the present gives us many indications that such secret actions and plans - newer forms of conspiracies - exist and influence the course of events, often remaining well-camouflaged, for a long time. Examples would be numerous: murdered investigative journalists, closed media trusts, cultural figures or important political figures threatened or even assassinated as punishment for the courage with which they undertook journalistic investigations or for the audacity to take critical positions against the regimes of force. The fact that, in many respects, the arrest and judgment of Christ were also the result of a conspiracy, cannot be denied either. The ontological plan - of the human nature restored through Christ's Passions, Death and Resurrection makes the plot that led to His death one that had the greatest stake in history. On the other hand, the indulgence which the Lord Himself has shown for this course

not necessary, therefore, to deny the evidence. On the contrary, it is appropriate to remain vigilant, to defend the rights and freedoms of citizens, to ensure that the laws and mechanisms of democracy are respected, in relation to the dangers that these secret actions announce⁹⁹.

However, we do not deal only with proven conspiracies, that, post-factum and in various ways, the public gets to know. There are many other conspiracy theories for which there is no evidence. Some do not yet have evidence because the relevant facts and documents, which could shed light, are classified so that analysts, historians or even the general public cannot see the whole story clearly. However, most of the unproven conspiracies are those that do not and will never have supporting evidence, that do not go beyond the stage of a

of things, letting Him be caught and judged, mocked, and killed for the salvation of men, shows us that beyond human scheming, which seemed to govern the course of things, the last word is that of God's Love, able to turn the bad things into good ones (Dionysius the Areopagite)!

⁹⁹ Obviously, both a personal and a society-wide approach is needed here. On a personal level, it is important to be carefully informed, from as many sources as possible, and to adopt, for all the realities and messages we receive, a critical spirit. Also, in spiritual order, and in prolonging the critical spirit, it is necessary to cultivate spiritual discernment, for a correct situation - not only in terms of sensitive realities, but also in terms of spiritual meanings and lessons. At the level of the society, an important role in curbing conspiracies is played by specialized institutions (such as the press or non-governmental organizations), but also the architecture of the legislative system, which prescribes the boundaries and regime of exercise of power in each state, and mechanisms supervision and mutual control. These elements, which make up the political and civic physiognomy of democracies, can preserve the rule of law, the safety of citizens and the protection of individual freedoms, in relation to any secret action that may affect them.

speculative hypothesis, of a hallucinatory suspicion¹⁰⁰. The latter could be called conspiracy theories (as long as they remain on this level detached from the concrete of reality), as opposed to conspiracies as such, justified, brought to light by clear evidence.

These conspiracy theories are the ones for which we formulate the following amendments: conspiracy fictions that obscure reality, vitiate judgments about the world and life, distorting the representations and meanings we derive from everyday experience¹⁰¹. It is unfortunate that, in the absence of concrete evidence, they still have a remarkable adherence to the public, gathering far too quickly, far too many followers. We deplore here the far too easy adoption of these conspiracy theories, without critical spirit, and their assumption of being unique, totalizing explanations for the vast events of the world.

¹⁰⁰ Here are some of these theories: the earth is invaded by aliens, who live among us, camouflaged in humans and will occupy the positions of power of this world, to then destroy civilization; moon landing was a farce of the Cold War; the Earth is flat; Hitler and the Nazis survived World War II by building a secret organization located underground or somewhere in the jungles of South America.

¹⁰¹ There is a creativity of the human spirit, a drive of the collective mind to imagine, to build and disseminate, to receive and promote, tirelessly, conspiracy-type explanations. Almost every time, along important events, which are global in scope, there are theories of this kind, fictions, conspiracy stories. We are dealing with a complicated mixture, with political and economic ingredients, matched with partially valid scientific data, which blends well-known names in the scientific world and religious meanings or prophetic places from various authors, all offering a syncretistic soup capable of linking more fragments of reality and be attractive to as many intellectual profiles as possible. The multitude of conspiracy theories spread today shows that the adoption of this narrative genre, for the great events of the world, has become a common approach, an almost reflexive gesture.

The causes of the rapid spread of conspiracy theories deserve analysis, especially since the acceptance of conspiracy theories is often accompanied by the complete, firm rejection of the official perspective presented by the authorities, by a non-acceptance of the official discourse¹⁰², and of the other scientific or factual evidence that contradicts the conspiracy theory¹⁰³. An analysis is obviously also justified by the fact that these life situations - in which people, of various categories, strongly embrace and support unfounded theories, to the detriment of

¹⁰² When this happens, citizens are no longer well-meaning in relation to the authorities. They do not believe in the good intentions of the decision makers, casting a general suspicion on the administration, but also on those who support this official speech. Adherents of conspiracy theories claim that they are all part of a hidden game. In this way, suspicion can be extended from political decision-makers and their messages to all other personalities and institutions that give them confidence. The suspicion will hover over those who send official messages, but also over those who agree with them. It is obvious that, in this form, conspiracy theories fuel the distrust in the institutions that manage the course of society, contributing to the dissolution of authority, weakening public order and, in the long run, widespread suspicion, a growing distrust that greatly affects the social climate.

¹⁰³ Even so, the reluctance of the masses to an explanation or evidence can stimulate scientific research, increasing the pressure to make investments and projects designed to shed light on unclear issues, to dispel suspicions. Suspicious positions can also mobilize the authorities, leading them to take more action in order to increase the information of the general public. Authorities can be helped by the concern that often accompanies a conspiracy theory to undertake investigations, where appropriate, into issues that concern the general public, for the same purpose - to shed light. Sometimes, the reaction of the general public, aroused by an unsupported conspiracy, can increase the vigilance of the authorities - as a kind of immune response, which can help to better manage a real situation that occurs later. However, conspiracy theories remain an important source of distortion of the perception of reality and can cause failures to fragment social cohesion, isolating people in groups that are hostile to each other, proponents of the theory and those who do not accept conspiracy stories.

public discourse, can provide important radiographs on the human spirit, relevant in the spiritual order as well. However, it is doubtless that these roots, which are responsible for the emergence and spread of these conspiracy theories, as well as their careful analysis are a far too broad topic. We cannot go into too much detail here. Some of the causes, however, are at hand and can be briefly mentioned: the confusing informational context - characterized by an unprecedented abundance, called data-smog¹⁰⁴; manipulation strategies, intentionally carried out by various specialized groups¹⁰⁵; the distrust of the citizens

¹⁰⁴ The term refers to the current cultural and informational conditions, in which we receive more news and data than we want and far beyond the limits of our processing possibilities. The abundance of information, many of them of poor quality, dissipates the focus of attention, making it difficult to analyze and reflect on them. The phrase *smog* comes from the blending of two English words, *smoke* and *fog*. Inflation of news and information creates a data smog. Cf. Francis Heylighen, "Complexity and Information Overload in Society: Why Increasing Efficiency Leads to Decreasing Control", Free University of Brussels, 2002, draft for The Information Society, <http://pespmc1.vub.ac.be//Papers/info-Overload.pdf>, apud. Dr. Andrew Weil, *Fericirea Spontană (Spontaneous Happiness)*, transl. by Iustina Cojocaru, Bucharest: Curtea Veche Publishing House, 2013, p. 247.

¹⁰⁵ It is about cyber-propaganda, found fake-news, for example, several European bodies, with expertise in analyzing the informational context. It has been found that propaganda, misinformation and "fake news" can polarize public opinion, undermining democracies and reducing citizens' trust in democratic processes and institutions. Propaganda in virtual spaces (usually poorly regulated) is a constant presence today, leading to surveillance and countermeasures aimed at discovering and limiting the spread of false information and its effects. The bodies of the European Union have provided, for example, permanent structures to identify and counter misinformation, against the manufacture, placement and distribution of fake news. See "EU to take action against fake news and foreign electoral interference", 10 October 2019, online available:

in the leading factors, in the political class; the preponderance of intuitive judgments, in relation to deliberative ones¹⁰⁶, the latter requiring a lot of documentation and moderate emotions. In addition, as aggravating factors, there are the lack of critical attitude¹⁰⁷ and the absence of discernment – which is to be

<https://www.europarl.europa.eu/news/en/headlines/priorities/disinformation/20191007IPR63550/eu-to-take-action-against-fake-news-and-foreign-electoral-interference>).

¹⁰⁶ Two types of thinking are targeted here. The first of these is *the intuitive thinking* - which takes place rapidly, issues quickly an opinion on a reality, the judgments being often superficial. The other one is *the deliberative thinking* that lingers more on the details, the decision process being slower, but less superficial. The distinction is proposed by S. A. Sloman, "The Empirical Case for Two Systems of Reasoning," *Psychological Bulletin*, Volume 119, Issue 1, pp. 3-22. Daniel Kahneman proposed something similar, through the slow-thinking - fast-thinking couple, in *Thinking, Fast and Slow*, New York, 2011.

¹⁰⁷ The importance of cultivating the critical spirit, in the current informational context, is a separate topic in itself. It is important, in this regard, to review those old and new ways that prove useful in cultivating critical thinking. A possibility often invoked is that of philosophical reading, especially of the pages written by classical authors (Plato, Aristotle, Marcus Aurelius) or those of the modern period (Descartes or Kant). The philosophers reveal, repeatedly and in clear phrases, the way in which our perceptions and judgments are created, in various circumstances of life. They clearly highlight many common errors, in receiving a fact but also in his mental examinations, revealing many details that can escape someone who is in a hurry or superficial. Undoubtedly, though in a distinct way, many pages of literature also offer us similar radiographs, through characters that are painstakingly rendered. Here, too, the vulnerabilities of the human spirit are brought to light, giving us the chance to better self-knowledge. The most handy examples are perhaps Dostoevsky's characters. At present, many subjects can be added to these perspectives, being able to offer contents that could help us to notice the most frequent errors of judgment that accompany ordinary life. Classical research in psychology as well as recent results in the area of behavioral economics or cognitive psychology, show us various limitations of human knowledge and reasoning that can greatly affect the quality of judgments. A work of behavioral economy accounts for

no less than 99 errors of perception or judgment, that are frequently encountered in the context of ordinary life, but also in terms of economic decisions. *The distortion of the survivor* - people overestimate their chances of success, *the illusion of grouping* - the tendency to notice patterns where they do not exist, *the social argument* - which makes us believe that we act well as long as we act like everyone else, are just three of the listed mechanisms which parasitise thinking, affecting judgments. Cf. Rolf Dobelli, *Arta de a gandi limpede (The Art of Thinking Clearly)*, Romanian version, Baroque Books & Arts, 2014. Finally and exceptionally, the critical spirit is under scrutiny, in a comprehensive way, in Christian spirituality: it is about spiritual discernment, the gift of distinguishing spirits. The phylocalic fathers consider discernment the greatest of virtues. In fact, according to the phylocalic fathers, the mere awareness of errors of judgment, of possible defects in the deliberative process, cannot be enough to improve the perception of reality and judgments about it. It is not enough to understand that, at the various levels of our reception and judgment equipment, we can think wrong. We need self training, establishing again and again an adequate, impassive spiritual disposition, so that the (spiritual) perception of events does not lose sight of anything essential: the good of the others, their beauty, the traps of the world, my possibility to deceive me, the work of the hidden powers of darkness, which can weave against men, the Providence of God - Who seeks the salvation of men. Christian spirituality regulates, through this positioning, man's place amidst all realities, getting him far from the extreme of the obsessive suspect and that of the innocent optimist, devoid of any vigilance. It is a subtle position of life, which moves delicately between "Be sober, be vigilant; because your adversary the devil, as a roaring lion, walketh about, seeking whom he may devour" (Peter 5: 8), and "Leave all your care to him (God), for he cares for you Casting all your care upon him; for he careth for you" (Peter 5: 7). We are dealing with a finely tuned position, far from all extremist versions, a refined conduct that moves freely between "Watch and pray, that ye enter not into temptation" (Matthew 26:41) and "be of good cheer; I have overcome the world" (John 16:33). Therefore, it is worth pointing out again and again, this kinship, with edifying valences, between the "critical spirit", on the one hand, and the spiritual discernment on the other hand, in a world that - in the reading of Christian spirituality - would need both. But issues like these will be addressed on another occasion.

expected if we place it, as phylocalic fathers do, at the highest level of spiritual bearing.

Let us summarize the picture outlined so far, in order to have a clearer situation. On the one hand, in history and in the recent past, there have been conspiracies that have been proven, fact that requires careful information, responsible conduct, both personally and at the level of the civil society, the supervision of political power, social and economic actions. On the other hand, in addition to these proven conspiracies, there are a lot of conspiracy theories that lack evidence. Some of them are waiting for clarifications, possible by declassifying some classified documents. Others, however, will never receive a serious argument or evidence to support them. In the rich network of social representations and narratives with public circulation, there are many stories in this last category, fictions that distort, not only the reporting of citizens to the administration, but also their perception of the world and of life¹⁰⁸.

It is therefore appropriate to try a few brief interdisciplinary considerations regarding this situation. How is the receptivity and preference of the human spirit for conspiracy theories explained in relation to the other explanations? How does conspiracy gain ground, increasing its number of followers, in a world that considers itself to be in the information age, in the knowledge society? Why do adherents of believers, interested

¹⁰⁸ Obviously, we cannot always distinguish real conspiracies from those that are mere conspiracy theories, creations of the mind. We are left, for such analyses, with the best possible information, the sharpening of the critical spirit, the cultivation of discernment. It turns out, somehow, that the critical spirit is indispensable in a society of knowledge, given the smog, the cognitive overload, the bursts of fake news. To a certain extent, the spread of conspiracy theories, which are gaining many followers without clear evidence, is related to the fair use of critical thinking.

in the spiritual life, adopt these theories? How do you explain the fact that people with a high level of education adopt these theories? How do the conspiracies conquer those with technical expertise in various fields, the famous intellectuals, with a solid scientific background, those accustomed to the rigorous manner of scientific discourse? The two observations which we have not developed will look into issues that could bring possible answers to these questions.

5.4 Conspiracy narratives grafted on the need for meaning. A spiritual perspective

The second remark provides a few answers to these questions while also being a warning with spiritual connotations concerning the tendency of the human mind to embrace simple explanations, often spiced up with secret, esoteric aspects. Despite the critical spirit, they are assimilated rather quickly, especially if the explanations link several aspects or realities of life or recent history, if they can provide a comprehensive meaning to the whole life situation.

The recording of this trend places us within cognitive psychology. Here the common appetite of the human mind for causal reasoning and narration is commonly highlighted¹⁰⁹. This need for meaningful explanations, strengthened by the cause-and-effect chain, fuels the rush with which the general public is willing to assimilate conspiracy theories. They are all sought inclusive explanations, and their adoption is often made to the detriment of elaborated explanations, verified scientific

¹⁰⁹ The fact is developed, for example, in an excellent study by Steven Sloman and Philip Fernbach, *Iluzia cunoașterii (The Knowledge Illusion, Why We Never Think Alone)*, Romanian version, Bucharest: Publica, 2017.

evidence. Accurate theories, which present meticulous, clear evidence and results, usually require more labour, accessing the public stage later and in a more difficult manner. It is a lack of proportion that is as obvious as difficult to solve: complex data and extensive scientific analysis are narratives that require significant collective efforts, more elaborate means and messages of communication to the general public, but also greater assimilation efforts from public. All these are chronophagous and effort demanding. Confronted with simple explanations, offered by conspiracy theories, that are often adapted to the understanding of the general public, scientific evidence and explanations get public suffrage more reluctantly and, most often, too late.

Somehow, we can see here how the conspiracies gain too many supporters in times of uncertainty, of panic, given that the information is missing. There are situations that stimulate haste, superficiality and intense negative emotions. And, under these circumstances, often on the horizon, only doubtful judgments can be foreseen¹¹⁰.

¹¹⁰ It is true that the crowd, in the sense of the whole human experience acquisition, is seldom mistaken. This time, however, one can see how many people can be wrong. Similar situations may be found in Christian spirituality. For example, the rapid change of the crowd, gathered to greet Christ at the entrance to Jerusalem, from the songs of praise and honor— "Took branches of palm trees, and went forth to meet him, and cried, Hosanna: Blessed is the King of Israel that cometh in the name of the Lord" (John 12:13), to mockery and wickedness, "And they that passed by railed on him, wagging their heads, and saying, Ah, thou that destroyest the temple, and buildest it in three days, Save thyself, and come down from the cross" (Mark 15: 29-20). The fact that many people believe something (such as a conspiracy theory in this case) or that a video has garnered a million views does not necessarily mean that that idea is also true, in fact, when there is a lot of emotion at stake, the crowd, like each of us, does not see the best meanings.

However, in this regard, another aspect gets full attention. In addition to the ordinary man, the expert is sometimes caught in the conspiracy chorus. Through a brief analysis, at the root of this unusual situation, would reveal several causes: a kind of quick thinking, fueled by emotions, inflamed by the desire to capture the essential and give the world a meaningful explanation, or a kind of cognitive fatigue (by analogy with compassion fatigue) manifested through the expert's lack of time or energy to go through the tedious work of research and to wait, as long as it takes, patiently, the necessary evidence for a well-founded verdict.

Most likely, even in this case, the narrative structure of the human mind is manifested, used to look for causal explanations and meaningful stories. And, as in situations like these, we cannot comprehend the full complexity of reality, and as we do not have, for a period of time, the necessary information, even the stories of experts tend to simplify, sometimes even oversimplify, reality¹¹¹.

We mentioned that there are meanings relevant to the spiritual life as well. This fact is also encountered in the field of faith. We can see it in the dialogue that Christ has with His disciples, who seek to understand the causes that determined the living condition of the man who was born blind. It is in the Gospel of John, chapter 9. The disciples ask Christ: "Master, who did sin, this man, or his parents, that he was born blind?" We can see here, in the reading of cognitive psychology, the intention of the

¹¹¹ Such remarks are often made in, Steven Sloman and Philip Fernbach, *Iluzia cunoașterii (The Knowledge Illusion, Why We Never Think Alone)* Bucharest: Romanian version Publica, 2017, p. 85, among others. Both the need for meaning and the claim that we can have it, that we can see it, are joined here.

disciples to explain this dramatic situation in a (causal) manner, capable of providing a meaning to the condition of the blind. Christ's reaction is, however, surprising as he rejects both¹¹². This time, his answer is not within this let us call 'classic' paradigm. "Neither hath this man sinned, nor his parents: but that the works of God should be made manifest in him." (John 9: 3). An unexpected answer is offered, which forces the mind to a mutation, from the register of narrative search to that of the humble contemplation of God's deep mystery. Therefore, we cannot always have an explanation for God's secret work in the world. In His endless wealth of goodness, He hides lights in places and situations where, according to the pattern of pseudo-spiritual, superficial thinking, one least expects it¹¹³.

¹¹² Christ does not always do this. There are places where, on the contrary, he connects suffering to sin and urges the healed sinner not to err so as not to be worse for him. This is the case of the 38-years-old patient from Vitezda Bath (John 5, 14). Jesus tells him: "Behold, thou art made whole: sin no more, lest a worse thing come unto thee" (John 5, 14).

¹¹³ It should be noted that in the order of the causal narratives that the mind seeks, this answer rather raises even more questions, some painful, others even defiant. This answer silences the searches, suggesting a change of perspective. Otherwise, in the old logic of a cause related to an effect, this answer jams the mind in unanswered questions: God, the One who made Heaven and Earth already reveals Himself, overwhelmingly, in these extraordinary realities! If the light of galaxies and stars, the light of the sun and of human understanding, the light of good deeds or the light of faith which enlightens man, if all these reveal His works in the world and with us, was it still necessary to show His work in the suffering of someone who lives from birth prevented by the absence of the light of the eye? How is His work revealed in one's inability to see clearly everything that shows His work in the world? However, the text should not be interpreted in this way, but as an invitation to free ourselves from the interpretive clichés that limit, constrain human understanding of the endless mystery of the other and the inexhaustible novelty of God's love in the world, for every creature.

In fact, this first observation leads us to a valuable lesson, in the order of knowledge, namely that the spiritual life (and the researcher's expertise, analogously) is certified by the humble, good attitude, which can long endure the life and the history, without making meaning obvious. Proper conduct sometimes translates into resistance to the temptation to provide a template meaning, a patterned explanation, for various everyday facts and happenings. We mean the refusal to embody an enlightenment that would explain the depth of one's life or the deep layers of human history, precisely because they have mysterious meanings, for the understanding of which we may not yet be prepared, qualified¹¹⁴. Here is a possible adjustment

¹¹⁴ Humility, in this case, could also mean a cognitive adjustment, a suspension of our judgments (which meets admirably with that *epoche* - ἐπέχω (from epékho, "to stop, hold back") + -η (-ē) - of the ancient skeptics), in order to receive - obediently - the seemingly absurd course of things. Not because they do not have an explanation, but because we are confident that in them, at the deepest level, there are impenetrable mysteries, which still require my efforts of knowledge. In a spiritual order, no explanation is forced, precisely because there is a deep belief that God ordains or allows them all and that, at the right time, the meanings that make sense to me will be seen. Somehow, this suspension of one's own judgments could be a solution - at least in some situations - to get out of the captivity of thought patterns. In a few pages of a book, in which Father Iustin Popovici comments on Maeterlinck, mentioning his remark that "human thinking, whipped by the mysteries of the world, searches in a martyr-like manner for the meaning of life, but does not find it," and that "this lets itself suspended in ever newer infinities, which only increase the thirst for knowledge", Iustin Popovici, *Abisurile gândirii și simțirii umane (The Abysses of the Human Thought and Feeling)*, p. 277, sqq. It could be said here that, in the order of the spiritual life, humility, the consciousness of my unworthiness and imperfection are a smoldering fire, which softens the tense bow of the need for meaning, weakening the claim to have it now, whole. In the light of faith, Iustin Popovici answers, Christ

of the mind, which concerns the effort, that is often overstated, to provide for everything we see or experience a quick and comprehensive explanation.

5.5 The power of the expertise and its vulnerabilities. An x-ray of Christian Spirituality

The second observation about conspiracies concerns how they fit into the minds of experts. Some findings in the context of psychological research, about the power of expertise, unexpectedly lead to some precious meanings for the spiritual life. Both can shed a little more light on the situation we are going through now.

To begin with, it must be said that there are authors who have highlighted how experts can be wrong, how they can make wrong decisions, how they end up misjudging things, even in issues that strictly concern the area of their expertise¹¹⁵. A series of specific findings clarify a few elements and reveal a worrying issue. On the one hand, the expert is stimulated and expected by the general public to provide a broader, clearer explanation than the average person can provide. The explanations of the expert, in a certain respect, are desirable and often prove to be surprising, with unexpected implications, which also maintains the prestige of the one expressing views.

However, there are many situations in which prestige, the level of competence are exactly what hinders the formulation of a well-founded opinion. This occurs because the specialist has, in his/her own expertise, a reinforcer, feeling, due to his competence, a sort of security, a certification of his opinion,

"sweetens the bitter mysteries of the world", and reveals to us "their fascinating depths" (Ibidem, p. 280).

¹¹⁵ On this topic: Madeleine L. Van Hecke, *Blind Spots. Why Smart People Do Dumb Things*, New York: Prometheus Books, 2007.

which often acquires definite tones. The situation is explained, to a certain extent, in a connection with the influences that power (given by knowledge, in this case) can exert on his / her thinking and behaviour¹¹⁶. Challenged by extraordinary events, and under the pressure of the expectations of the general public, expressing an opinion hastily formulated, the expert risks losing even the circumspection specific to the scientific spirit, i.e. exactly that approach that accompanied him during his scientific career. The comprehensive explanation offered by some conspiracy theories endorsed by experts, mixing the scientific plan and the more general area of life and society, presents this unacceptable imbalance: too great a leap from the scarcity of the information and scientific results known to the conclusions concerning world life.

There are spiritual fragments in this fact as well, because in the area of faith we also encounter similar situations. The most convenient example is the dialogues that Christ had with the Pharisees, who, experts in the Old Law, taught the crowd, without realizing that they themselves were wandering without knowing the scriptures. On several occasions, initiating discussions with Christ, the Pharisees or Sadducees try to trap Him in various semantic discussions, to entangle Him in interpretive nets. However, they did not succeed. The Sadducees ask him Christ whose wife shall a woman who

¹¹⁶ In *The Paradox of Power*, Dacher Keltner notices that, with the power they gain over people, the leaders are in danger of losing empathy and gratitude to them, becoming deprived of precisely those characteristics that helped them gain people's support in gaining power. Cf. Dacher Keltner, *Paradoxul puterii (The Power Paradox)*, Romanian version, Bucharest: Curtea Veche Publishing House, 2018.

married seven brothers¹¹⁷ be in the resurrection. Christ answers: "Ye do err, not knowing the scriptures, nor the power of God" (Matthew, 22, 29)¹¹⁸. A similar situation, but with an even more dramatic overtones, is that in which Christ heals a hunchbacked woman who has been suffering for 18 years (Luke 13: 10-13). The ruler of the synagogue, an expert, therefore, in the interpretation of the Law, "answered with indignation, because Jesus had healed on the sabbath day", saying to the crowd: "There are six days in which men ought to work: in them therefore come and be healed, and not on the sabbath day" (Luke 13:14). But, as in the previous case, Christ has a different answer for this expert. He rebuked the rulers of the synagogue for the cold, unsympathetic, careless manner in which they understood and interpreted the Law.

Therefore, neither they nor the disciples receive an expected answer. At the same time, Christ does not provide an answer that is inconsistent with the Law. The surprise is that His answer is one that unexpectedly broadens the meanings of the Law, bringing an additional understanding, from His Life and Virtues, He being the One who brings the tiding of the Law: "Thou hypocrite, doth not each one of you on the sabbath loose

¹¹⁷ "The same day came to him the Sadducees, which say that there is no resurrection, and asked him, Saying, Master, Moses said, If a man die, having no children, his brother shall marry his wife, and raise up seed unto his brother. Now there were with us seven brethren: and the first, when he had married a wife, deceased, and, having no issue, left his wife unto his brother: Likewise the second also, and the third, unto the seventh. And last of all the woman died also" (Matthew 22, 24-28).

¹¹⁸ The explanation is, obviously, both known and unexpected for those present there: "For in the resurrection they neither marry, nor are given in marriage, but are as the angels of God in heaven" (Matthew, 22, 29-30). The situation warns us about the habits of thinking of the expert, who knows better and better, but can also obliterate, can gradually erase, imperceptibly, essential meanings related to what he knows.

his ox or his ass from the stall, and lead him away to watering? And ought not this woman, being a daughter of Abraham, whom Satan hath bound, lo, these eighteen years, be loosed from this bond on the sabbath day? And when he had said these things, all his adversaries were ashamed: and all the people rejoiced for all the glorious things that were done by him.” (Luke 13: 15-17).

Today we know, through the wonderful efforts of the saints, that the work of the Holy Spirit, who inspires the understanding of the texts, and who also ignites the flame of spiritual life in the soul of the faithful lies at the heart of this living understanding of the Scripture. The Holy Spirit enlightens the proper meanings of the texts of Scripture, but especially the grace of the Holy Spirit spiritualizes the reader's understanding, as he improves, through his own spiritual efforts and needs, bringing the one who is struggling to the proper disposition of reading, to the proper opening of the spirit towards receiving the useful meanings. It is not, therefore, just a cold, academic effort, of mechanically applying an interpretive grid, but a work of the heart; not only of knowledge, but of the spirit, of an inner disposition, permeated by virtue, capable of using properly, according to the circumstances, all that is known, and capable of giving up all that is known, for the humble reception of those meanings which are above understanding.

Something similar occurs in the field of scientific competence. It is a critical spirit, which inspires the owner for a correct management of knowledge data. This spirit illuminates, in a salutary manner, the discernment necessary in confusing situations, in order to correctly separate what is known and proven from the unknown. The self-critical spirit can slow down the tendency to pre-pronounce, sacrificing the hasty explanation for a later, better-founded verdict or perspective.

All these aspects reveal to us, by analogy, a kind of spiritual exigency that must manifest itself more firmly on the data of knowledge - whether scientific or theological. Such exigency is necessary, whether we are talking about assimilating information from the vast information field of the world or whether we are talking about providing it. We need attention that regulates the movements of the spirit itself, that supervises the dispositions that colours our depths in the labour of knowledge and communication with others. They all contribute to fixing the angle of perception of the world, to finding meanings about it, to the way we choose to communicate to others about them.

Otherwise, the haste, the dare, the generalized suspicion of a hidden evil in all the enterprises of the authorities and all the deeds of the strangers, the panic or security and inflexibility towards our own interpretation, and anything else that may be similar cannot inspire, cannot ensure a clearer capture of what is happening around us, cannot help us dive into the depths of the world and life or fly over their heights. Rather, the distrust of one's own explanations, the power to question our own beliefs, the strength to humbly wait for a long time until something more certain is seen, the long exploration, cognitively fasting from the sweet food of simplistic explanations, all these would more likely do the suitable job while looking for an answer¹¹⁹.

¹¹⁹ Let us mention here everything that needs mentioning. These remarks must primarily concern me. Christian spirituality forces me to start with myself. It is necessary to insist so as to feel the thrill of an ever-valid lesson, a lesson continually addressed to my spirit, in what has been said here. It is necessary to think again and again, placing myself at the heart of the matter, understanding that I am the one warned of everything. In the capacity that I humbly have, that of a professor of theology, I must see in all these observations the exhortation to never

5.6 Faith vs. credulity: a task of reflection for the current theology

We pause here these considerations regarding conspiracy theories and how they gain followers among the general public most of the time, but also sometimes among experts. We shall

rely entirely on what I think, on what I know. Let me avoid the appetizing and crazy closure offered by my meanings, which I have polished alone for a long time, not reject those thoughts and words that rebuke me, that indicate to me the vulnerabilities of my own thinking, because these are often the ones that could renew my mind. In my endeavor to reflect on the truth of the faith and to live in accordance with Him, I am warned to avoid the insensitive security of one who, content with knowing, performs endless conceptual distillations or sterile reflections on biblical, theological, or scientific, forgetting the essentials; namely, that they are meant to increase our lives and love for people and for God! This is a good place for reflection, found by many enlightened minds, by those striving in Christian deserts. Many philocalic fathers warned about the power of the demon of insensibility, which can vitiate, which can ruin even the depths of those striving fixed in the routine of good deeds. From various points of view, many other authors saw this situation as dangerous, namely that we can deceive ourselves. Benjamin Franklin expresses this idea, for example: "no one deceives you more than you do yourself!". In my capacity as a theology professor (a condition does not allow me to avoid imposture, the dilettantism of the one who learns lofty things, yet does not least feel inside, which is inevitable), in this problematic quality, some words of Christ must always ring in my mind: "Woe unto you, scribes and Pharisees, hypocrites!" (Matthew 23:13). In my case, I find them valid, because I do not double with virtue, obedience and love what I preach, what I know and what I teach in the academic exercise. As for me, the inconsistency between what I know and expose, on the one hand, and what I am, on the other, is the wound of my life, which falsifies my proper relationship to life, to my neighbours and to God. I have to state, again and again, my situation beyond reality, outside the playing field of life, living without the regulation of the spiritual life. And, of course, to feel the urgency of overcoming this compromising situation that requires, again and again, continuous efforts of virtue, of good work, as the answer to the call of Christ and of His complete human life, given to us.

only mention that many other aspects in this discussion about the efforts of relating adequately to reality and about the burden lifting oversimplification of conspiracies could be relevant to the spiritual life. On another occasion, it will be necessary to analyze, for example, in the order of theological reflection, the fact that often some faithful, who relate decisively to the values of the faith, easily embrace conspiracy theories. It is an important fact, if we take into account that, being in opposition to scientific or historical evidence, those people lose an important connection with the reality in which they live, weakening the contact with the world, but also the possibility to offer spiritual values necessary for a useful navigation through the maze of everyday facts¹²⁰.

Finally, this situation remains important for theological reflection also because it shows us a hypostasis of failed perception, often found in the reality of faith and religious life, but also in understanding the world. And this will have to be analyzed one day. Many people do not have the time to explore the full complexity of the evidence and to try a broader understanding of the whole set of facts, not only in the case of scientific radiographs, but also in those concerning the life of faith and its truth. Something similar, therefore, happens with the perception of Christianity, with man's recent relating to the values of faith. Spiritual truth, as the basic coordinate of human life, and the community of faith, as a model of virtuous life, deeply transformable inside, with the others and with God

¹²⁰ As we have seen, in the case of SARS-CoV-2, even some scientific articles and authorized voices supported issues that were later amended by the scientific community. This means that the rejection of conspiracy theories does not mean a non-critical assimilation of all the results offered by various researches. In fact, the whole issue of reporting on the results and information that emerge is dynamic and requires constant vigilance.

remain, as realities, almost unnoticed. The absolute novelty of the life of Christ does not come to enliven the life of the contemporary man, He-the Truth remains incomprehensible, He-the Incarnate as man, in the most obvious form, remains invisible, He-Crucified and given to us as the Eucharist, remains inaccessible. The reception of the truth of faith, carried out by the man in the haste of the world, made shallow by entertainment, cognitively tired of the informational noise of the civilization or self-satisfied with his own expertise, becomes a burden. How could it be otherwise, if the subject called to receive the light, to step on the path and receive the Truth, to live His life, in communion with his fellows, is burnt out? How could it be otherwise, since man has recently been pressed by alert movements and pulled in all directions by its unspiritual indicators? If he has too little time for the depths, if he lives with a major energy deficit for the labor of searching for meaning, if he does not have the clarity to see his own imperfections?

Just as conspiracies sometimes replace the radiography of meticulous explorations of science, distorting the reality of the facts of the world and putting in place something simpler, easy to accept by many, a few simple clichés, most often disqualifying, easy to convey through frugal posts, blunt man's insensitivity, dislocating the deep light of spirituality and the Truth of Faith from the heart of his life. But issues like these require separate analysis.

6 Civilization and Pandemics. A reading of Christian Spirituality

Returning to the CoVid-19 pandemic, and taking into account these data, we can say that a broad perspective is more useful. If we accept the broader setting of the facts, we can outline a more comprehensive understanding, which shows that evil is related to an undesirable economic philosophy and civilization practices, irrational habits and long-ignored inequities. To a large extent, we have caused the evil we experience ourselves, given the world we have chosen to build. If so, then the current pandemic could produce a rare, bitter and too expensive opportunity to question some of our habits.

6.1 God is not the author of evil

Three other considerations of Christian spirituality could be made here regarding the issues put forth so far. The first spiritual observation concerns the need for an adequate understanding of the divine Providence, of the place and work of God in the unfolding of these events. Many times, in these months, in various ways, the idea that we are experiencing God's punishment, given by Him for the sins of men, has also been affirmed. Undoubtedly, "there is no man that sinneth not," and that "none is good but one" (Luke 18:19). But this is not the sensitive point of this understanding, but the way we place the drama we are experiencing before God.

This understanding is worth clarifying since it is important to properly place in agreement two undeniable realities. The first of these relates to the essence of the Revealed message, according to which God is love (I, John, 4, 8) and that He loves the world completely. The other reality refers to the presence of the evil, suffering and death, which cannot be questioned and which we experience today, with a new magnitude. The

spiritual understanding of the pandemic, as a new living condition of the global world, can be glimpsed at in this relationship between God and the evil we are facing. If God loves us, how and why does this bitter and painful trial of life emerge? Where is His work and His saving love? If the world, the Creation made by Him was, from the beginning, “very good”¹²¹, why are the evils we live in today so great, so prominent? Did our wickedness overcome His love? Or, if He Himself sends us these burdens to punish us, then how do these sufferings caused by Him reconcile with His love for us, with His Sacrifice for the sinners and mortals of the world, for the fragile creature that we are?

Numerous biblical fragments and their meanings revealed by the Holy Fathers show the truth of faith that God is love. In The Holy Scripture, the existence of man and the world is spiritually encompassed and radiographed, in the very fragments of history that it contains. Man’s life and that of the world is even reviewed in the very Person of Christ the Lord about whom the New Testament tells us. This is also the reason why, in the current pandemic, it is appropriate to return to Holy Scripture.

In the text of Genesis, we find one of these places, which frames semantically the situation we are facing. After the episode of Adam's fall, God addresses him a truly burdensome message: Because thou hast hearkened unto the voice of thy wife, and hast eaten of the tree, of which I commanded thee, saying, Thou shalt not eat of it: cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life; thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field; In the sweat of thy face shalt thou eat bread, till thou

¹²¹ “And God saw everything that he had made, and, behold, it was very good” (Genesis 1, 31).

return unto the ground; for out of it wast thou taken: for dust thou art, and unto dust shalt thou return.” (Genesis 3, 17-19).

This is followed by an event that proves to be central to the entire Orthodox anthropology, which sets the covenant of God's work in the world after the fall of Adam. God makes for man "coats of skin." The text mentions that "Unto Adam also and to his wife did the LORD God make coats of skins, and clothed them." (Genesis 3, 21). Due to haste or ignorance of the patristic thought, God's intervention after the fall of Adam could be understood as a punishment. Since Adam sins, disregarding the divine command not to eat from the Tree of the Knowledge of good and evil, God punishes him for his disobedience. However, this interpretation, which shows suffering and death as God's punishments, does not agree with the meanings that the saints foresee in the text of The Scripture.

In a particularly valuable study¹²², the Greek theologian Panayotis Nellas discusses the manner in which the Holy Fathers interpret these evils and the words addressed by God to Adam after the fall. It is not a curse uttered by Him against man. Authors such as John Chrysostom, Nicholas Cabasilas or Maximus the Confessor reveal that the evils announced for Adam and Eve emerge, in fact, from the very rationality of Creation, inevitably affected by sin. In the understanding of these holy fathers, writes Nellas, sin brings punishment, "and the punishment comes naturally to the one who offends, it does not derive from the justice of God, who neither struck nor demands satisfaction, but from the justice of creation"¹²³. The

¹²² Panayotis Nellas, *Omul – animal îndumnezeit. Perspective pentru o antropologie ortodoxă, (Deification in Christ: Orthodox Perspectives on the Nature of the Human Person)*, Romanian version, translated by Ioan I. Ică jr, Sibiu: Deisis, 1999.

¹²³ Ibidem, p. 100

evil is not from God, but return from Creation against man, as its justice of it.

The main idea of the interpretation offered by Christian fathers should be kept in mind even today, in the context of the CoVid-19 pandemic. The constraints, suffering and death we see and experience now, as well as the challenges they cause, as ever and anywhere in history or in the future, are not from God, but are consequences of our actions.

The scientific world is no stranger to such approach either. The causes of this pandemic, says an authoritative voice of zoology, are related to human behavior, elevated to the rank of civilization, which has acquired, in recent decades, world-wide dimensions. We destroy natural habitats, force animals to grow in artificial environments, change their food, change their place and rhythms of life, raise them in captivity, and do so exclusively for consumption. Everything reduces the distances between us and the animal world, man being present in the living world at levels of intensity completely different from the last fifty years. And, above all, the catalyst for pandemics, the global connection that is rapidly spreading disease¹²⁴.

6.2 Adam fell, but God's love never does

The second observation is closely connected to the first and proves essential for understanding the Christian perspective on God's love for man after his fall. The Holy Fathers discern in the

¹²⁴ The ideas are taken from the statements of Andrew Cunningham, Professor of Epidemiology for Wildlife at the Zoological Society of London, in coverage by CNN regarding the already quoted data: Nick Paton Walsh and Vasco Cotovio, "Bats are not to blame for coronavirus. Humans are", CNN, 20 March 2020, available online: <https://edition.cnn.com/2020/03/19/health/coronavirus-human-actions-intl/index.html>.

"coats of skins" phrase the very expression of His protective love shown to the fallen man, affected by the consequences of his fall turned against him, namely suffering, sickness and death. Adam fell, but God's love for him does not. And, if we keep to this meaning, we can say that even now it has not fallen. Specifically, the phrase "coats of skin" is understood as a kind of medicine that God gives to man, a medicine meant to strengthen him, in his new living conditions. St. Nicholas Cabasila writes in this sense that wound, pain, and death "were conceived from the beginning against sin", offering a cure to one who has fallen ill"¹²⁵.

Therefore, in the light of this understanding of the Holy Fathers, the evil that we experience in the world is greatly caused by our very evil deeds. St. John of Damascus writes that we, the humans, "are the cause of these evils" and that "involuntary evils are born of voluntary evils"¹²⁶. Everything God had made, he continues, as it was made, is very good (Genesis 1:31). If they remain so, he writes, "as they were built, they are very good," but "if they deviate, voluntarily, from the state conforming to nature, and if they come to a state contrary to nature, they end up in evil"¹²⁷.

It is important to keep, for these difficult days, the conviction that God is not the author of evil and death, and we will see a new reality. We may find that, one way or another, we are the perpetrators of the evil we are experiencing today, a fact that fully deserves careful analysis, honest reflection. It is an incomparably more difficult path than what the simple label of

¹²⁵ St. Nicholas Cabasilas, *Despre viața în Hristos (Life in Christ)*, apud Panayotis Nelas, *Omul – animal îndumnezeit*, p. 100.

¹²⁶ St. John of Damascus, *Dogmatica (Dogmatics)*, Scripta Publishing House, Bucharest, 1993, p. 189.

¹²⁷ Ibidem, p. 19

conspiracy offered to us, which simply externalized, throwing the whole story overboard. On this path of assumption, we could get a glimpse at the hidden mistakes, the design errors that affected our entire architecture of civilization. This is how we could discover the deficit of spiritual life that accompanies the dynamics of the world and of life, in order to realize that we are dealing with an irreplaceable absence.

In the light of this understanding, which shows to the world that God loves people in the midst of hard trials, the change of human life is also made on the basis and with the power of this love. We find the encouraging manner, strengthened by hope in His help, in the words addressed by Daniel, Patriarch of the Romanian Orthodox Church, in one of the messages addressed to the faithful, during the pandemic: “at the end of this pandemic (...) God will enlighten all men to better understand that only through faith, hope, and love, expressed in good deeds for the others, can trials and suffering be overcome and can His peace and joy be felt”¹²⁸.

6.3 Spiritual life and some of the shortcomings of civilization

The third spiritual observation comes springs from the first two and could be edifying for the current situation. It is also paradoxical, being both surprising and mind-boggling. What it is? It is well known that the scientific world was no stranger to the signals and dangers that coronaviruses hide, even years

¹²⁸ Cf. Daniel, the Patriarch of the Romanian Orthodox Church, message addressed on the 12th May 2020, available online: <https://www.agerpres.ro/culte/2020/05/12/patriarhul-daniel-starea-de-pandemie-ne-cheama-sa-transformam-suferinta-in-speranta-si-izolarea-in-dorinta-de-comuniune--503610>.

before the advent of CoVid-19. Especially after SARS, various researches have highlighted the danger and the force of the spread of these viruses, starting from their characteristics, from the ease with which they undergo changes, being able to adapt to host cells. Genetic studies, statistical research, comparative studies, various risk assessments of coronaviruses and their possible causes have been published¹²⁹. WHO (World Health Organization) has made various recommendations while news about possible such scenarios has been broadcast. However, global reactions have been far too weak.

A 2007 study, for example, which relied heavily on SARS data, identified the presence of SARS-CoV like viruses in great horseshoe bats and pointed out that they are living reservoirs while the palm tree civet can act as an amplifier of the danger (through the possibilities of genetic matching they offer). This, coupled with a development of the culture and consumption of exotic animals, is, the researchers said at the time, a “time bomb”¹³⁰. Here we can also mention the SADS episode (acute porcine diarrhea syndrome), a new disease we talked about, caused by the SADS-CoV coronavirus. Relying on the high number of infections, researchers have issued warnings about the necessity of a minute study on the diversity of types of coronaviruses and their potential to trigger epidemics affecting

¹²⁹ A piece of news on Romanian Broadcast ProTv mentioned that, as early as 2019, WHO issued warnings about the spread of such a virus (<https://stirileprotv.ro/stiri/actualitate/oms-anunta-exact-acum-un-an-ca-o-pandemie-este-inevitabila.html>). The adherents of conspiracy theory have used this situation as evidence that the criminal act has been known and prepared since then, not to show that scientific data correctly anticipated the risks.

¹³⁰ Cf. C. C. Vincent *et al.*, “Severe Acute Respiratory Syndrome Coronavirus as an Agent of Emerging and Reemerging Infection”, *Clinical Microbiology Reviews*, Volume 20, Issue 4, October 2007, pp. 660-694. DOI: 10.1128/CMR.00023-07.

livestock farming and public health¹³¹. We may also mention here the urges of the authors who have studied viruses carrying bats in twenty countries, which support the need for a careful analysis of the diversity of viruses in order to prevent potential risks¹³². In fact, many warnings have been issued in this regard. And yet, too little has been done to prevent such situations, and we have seen this in the way states, even civilized ones, have responded to the crisis. Late and uncoordinated. Why? There are, as just now, when we see an increase in meat consumption, despite the fact that it turns out to be unhealthy, other fundamental defects of our civilization. Although scientific research provides information and, globally, we have more possibilities for action, the way we act as a civilization is characterized rather by incoherence and inertia. There are many causes of this fundamental dysfunction in the cooperation and response mechanisms that society formulates. But it is a vast subject, from which we can conclude only a few things. Some ethical, psychological and anthropological analyses indicate that we tend to minimize the dangers if they are more distant in time or space¹³³. In a similar way, in the deafening rhythms of political debates and economic competition, such warnings, which viewed coronaviruses as dangers, were not

¹³¹ Cf. P. Zhou et al., "Fatal swine acute diarrhoea syndrome caused by an HKU2-related coronavirus of bat origin", *Nature*, Volume 556, 12th April 2018, pp. 255-258, <https://doi.org/10.1038/s41586-018-0010-9>.

¹³² Cf. Simon J. Anthony *et al.*, "Global patterns in coronavirus diversity", *Virus Evolution*, Volume 3, Issue 1, 12 June 2017, vex012, pp. 1-15, <https://doi.org/10.1093/ve/vex012>.

¹³³ Cf. Igmar Peerson, Julian Săvulescu, *Neadaptați pentru viitor (Unfit for the Future)*, Romanian Version, Bucharest: All Publishing House, 2012, p. 57.

received and did not cause the world to reconsider or provide an adequate response. The warnings fail to be convincing, if they aim only at a possible future, and not a definite one, if they indicate an indefinite distant danger, and not one that specifies the year and day when it will emerge. We are not naturally trained to be aware of these likely dangers.

For more than half a century, sociologist Herbert Simon has noticed that our decision-making processes have been characterized by *limited rationality*. In any decision that we wish to be optimal, we are forced to judge within the time limits we have, but also according to our limited ability to access additional information, to retain and process all those data that could count in that decision¹³⁴. Since then, many other observations have revealed the vulnerabilities of human judgments and the limiting nature of our enterprises. We have a selective perception of reality, and the perception grid is provided - without noticing it clearly, every time - by the universe of our own experiences¹³⁵. In this way, we are inclined

¹³⁴ Cf. R. Selten, "What is Bouded Rationality?", in: *Bounded Rationality. The Adaptative Toolbox* (G. Gigerenzer and R. Salten, eds.), Cambridge Massechussets: The MIT Press, 2002, pp. 13-20.

¹³⁵ "We are accustomed, two recent authors assert, to our comfortable lifestyle, so that it is difficult for us to imagine that our descendants might one day not have access to it because of our destructive influence on the climate and the environment". In fact, the opposite is true, as we are rather inclined to take for granted that the development of the world will continue unhindered, "according to the same pattern," which we consider sufficient to solve those future problems caused by the present that we tailor; it will no longer be necessary "for us to take protective measures, as future generations will be much better equipped to do so thanks to scientific progress." Cf. Igmarr Peerson, Julian Săvulescu, *Neadaptați pentru viitor (Unfit for the Future)*, Romanian version, Bucharest: All Publishing House, 2012, p. 149.

to value especially those aspects of life that confirm our already structured beliefs¹³⁶.

Therefore, as long as we live in civilized cities, away from the unknown dangers of other distant places, it will be difficult for us to keep these risks in mind and to organize our efforts to change something. In a way, many of these obstacles are driven by the very construction of civilization. For example, those living in urban areas are often far away physically and informally from the effects of the processes that ensure their well-being. "Most people buy their food from the supermarket and rarely think about how or where it is produced or the impact of production on the ecosystem"¹³⁷. Likewise, we know too little about the brutality to which wild animals are exposed, hunted every hour, but also about the lives of birds and animals violently bound in the mechanics of industrial production, in intensive farming¹³⁸. Further, in many cases, even if we found

¹³⁶ Cf. J. L. Freedman, D. O. Sears, *Selective Exposure. Advances in Experimental Social Psychology*, ed. 1, Berkowitz, vol. 2, Academic Press, New York, 1965, *apud* Daniel Gilbert, *În căutarea fericirii (Searching for Happiness)*, Romanian transl. by Mihaela Vacariu, Bucharest: Curtea Veche Publishing House, 2012, p. 232.

¹³⁷ Cf. A. Wijkman, J. Rockström, *Falimentarea naturii: negarea limitelor planetei (Bankrupting Nature: Denying Our Planetary Boundaries)*, Romanian version, Compania Publishing House, Bucharest 2013, p. 22.

¹³⁸ "Laying hens, for example, have a complex world of needs and behavioural impulses. They feel strongly urged to explore the environment, to look for food and nibble around, to establish social hierarchies, to build nests and to pluck their feathers. But the egg industry often locks chickens in tiny cages, and it is not uncommon to cram four hens into such a cage, each with a space of about 25 by 22 centimeters. Chickens receive enough food, but they cannot claim a territory, build a nest, and engage in other natural activities. In fact, the cage is so small that the hens can often not flap their wings or get up completely." Something similar happens in many pig farms, which "usually lock up sows that suckle in cages so small that literally they

out about them, it would not seem to us that human action would be reprehensible. It is possible, therefore, that many who consume eggs, milk, and meat think very little about "the fate of the hens, cows, and pigs whose meat and products they eat" and when they do, they should consider that "such animals are really too little different from cars, devoid of sensations and emotions, incapable of suffering"¹³⁹, and ultimately intended to satisfy all our food fads.

To realize the scale of these things, at the level of the whole civilization, it may help us to mention that "tens of billions of domestic animals live today as part of an assembly line and about fifty billion of them are slaughtered annually"¹⁴⁰. Beware! We must not blame this increase in consumption on the growth of the planet's population.

The cause is, to a much greater extent, the preference of those in developed and developing societies to consume more meat. The statistics are helpful here too. At present, meat production is four times higher than fifty years ago, given that the population, since then and until now, has doubled¹⁴¹ "the increase in consumption, attributed to civilized and emerging countries, is also an amplifier for some global issues"¹⁴².

cannot even turn from one side to another (not to mention walking or looking for food"). Sows are kept in these cages day and night for four weeks after calving. The offsprings are then taken to be fattened and the sows are fertilized to make the next row of piglets". (Youval Noah Harari, *Sapiens. Scurtă istorie a omenirii (Sapiens: A Brief history of mankind)*, Romanian version, Iași: Polirom, 2017, pp. 288-289).

¹³⁹ Cf. Youval Noah Harari, *op. cit.*, p. 289.

¹⁴⁰ Ibidem, p. 292.

¹⁴¹ Cf. H. Ritchie, Max Roser, "Meat and Dairy Production", *Our World in Data*, Nov. 2019, available online: <https://ourworldindata.org/meat-production>.

¹⁴² Intensive livestock farming is, in the opinion of some authors, the global engine for increasing meat consumption, while the branches

In a different approach, that of ethological research, this time, diametrically opposed results are revealed, which show us

covering feed production require increasing areas of agricultural land for monocultures that affect biodiversity. The operation of livestock-intensive industries actually consumes valuable natural resources, pollutes the environment, and increases, among other things, the level of greenhouse gas emissions. Most likely, these dynamics accentuate the poverty of the population in other areas of the world, where cereals are more expensive, but also affect climate change. Intensive livestock farming is, in the opinion of some authors, the global engine for increasing meat consumption, while the branches covering feeding production require increasing areas of agricultural land for monocultures that affect biodiversity. The functioning of livestock-intensive industries actually consumes valuable natural resources, pollutes the environment and increases, among other things, the level of greenhouse gas emissions. Most likely, these dynamics augments the poverty of the population in other areas of the world, where cereals are more expensive, while also affecting climate change. Therefore, increasing meat consumption and animal production in intensive animal husbandry should be closely linked to economic inequalities and other global dangers (Cf. T. Weis, "The Meat of the Global Food Crisis", *The Journal of Peasant Studies*, Volume 40, Issue 1, 5th February 2013, pp. 65-85, <https://doi.org/10.1080/03066150.2012.752357>). We are dealing, in fact, with a remark that keeps appearing again and again in the public space. Another example is the statement made by Zhengli Shi, co-signer of the study published in *Nature* on SADS, which highlighted the dangers that coronaviruses hide. (Cf. P. Zhou et al., "Fatal swine acute diarrhoea syndrome caused by an HKU2-related coronavirus of bat origin, *Nature*, Volume 556, 12 April 2018, pp. 255-258. <https://doi.org/10.1038/s41586-018-0010-9>). In an interview, Zhengli Shi deplored the expansion of agricultural and food enterprises that disrupt niches, bats' living spaces, "increasing the chance of contact between wild and domestic animals and the risk of transmitted diseases from wild animals "(Cf. M. Schreiber, "A Novel Virus Killed 24,000 Piglets In China. Where Did It Come From?", 4th April 2018, available online: <https://www.npr.org/sections/goatsandsoda/2018/04/04/599179621/a-novel-virus-killed-24-000-piglets-in-china-where-did-it-come-from?t=1591247401612>).

aspects radically different from those present in the sphere of abuses on the living world. Researchers have found, for example, that chickens represent their numbers spatially, from left to right, just like most people (left means less, while right means more)¹⁴³, and that they can distinguish simple proportions¹⁴⁴, and that they can handle some simple operations¹⁴⁵. Hens, the research tells us, i.e. the birds that we force to grow in tight places, to be slaughtered and consumed, have remarkable behaviour: "they set up complex social relationships, can form stable social groups, in a few days, with clear hierarchies"¹⁴⁶.

¹⁴³ Cf. R. Rugani, "Number-space mapping in the newborn chick resembles humans' mental number line", *Science*, Volume 347, Issue 6221, 30 January 2015, pp. 534-536, <https://doi.org/10.1126/science.aaa1379>.

¹⁴⁴ Cf. R. Rugani, "The Use of Proportion by Young Domestic Chicks (*Gallus gallus*)", *Animal Cognition*, Volume 18, Issue 3, May 2015, pp. 605-616.

¹⁴⁵ Cf. R. Rugani, "Arithmetic in Newborn Chicks", *Proceedings of the Royal Society B: Biological Sciences*, Volume 276, Issue 1666, 1st April 2009, pp. 2451-2460, <https://doi.org/10.1098/rspb.2009.0044>. These last three studies are also quoted in Jennifer Ackerman, *The Genius of Birds (Geniul păsărilor)*, Romanian version, Bucharest: Publica Publishing House, 2018, p. 14.

¹⁴⁶ Jennifer Ackerman, *The Genius of Birds (Geniul păsărilor)*, Romanian version, Bucharest: Publica Publishing House, 2018, p. 139. In general, birds, most often neglected by the hurried man of large urban agglomerations, have proven, under the careful magnifying glass of science, amazing abilities. Here are the findings of an author who had the patience to gather the testimonies and results of research on bird behavior: "Many species of birds have highly developed social skills. They breed in colonies, bathe in groups, nest together, look for food in flocks. I listen. They're arguing. Wrong. They lie and manipulate. They kidnap. They divorce. Sometimes they show an acute sense of fairness. They make gifts. They play pulling the rope or catching, only they use branches, pieces of Spanish moss, or pieces of fabric. They steal from neighbours. They warn their offspring to stay away from strangers. They tease each other. They share things. They cultivate social relationships. They compete for status. They offer kisses. They call each other when one of them dies. Sometimes they mourn" (*Ibidem*, p. 137).

The living world is full of remarkable species, which prove amazing behaviours and formidable intelligent and communication skills¹⁴⁷. If this is the case, it is certain that many of the brutal treatments we give animals have a negative impact on their health, and this can affect us as well, since the stress and pain they cause greatly weakens their immune systems¹⁴⁸.

In the midst of these recent life sciences results, we find aspects that are in remarkable convergence with older spiritual perspectives. Greek philosophy developed, for many centuries, reflections on logos, and Christian theology lifted those meanings, in the light of Revelation, to their most generous comprehension.

In Answers to Question 51, addressed to Thalassius, Saint Maximus the Confessor adopts such a perspective. On the one hand, with a trained spirit, we can find, in the lives of the world,

¹⁴⁷ Some references on this topic: Edward O. Wilson, *Sociobiology (Sociobiologia)*, Romanian version, Trei Publishing House; Virginia Morell, *Animal Wise: How We Know Animals Think and Feel (Inteligența animală. Uimitoare dovezi de emoții și gânduri la diferite specii animale)*, Romanian version, Litera; Jennifer Ackerman, *The Genius of Birds (Geniul păsărilor)*, Romanian version, Bucharest: Publica Publishing House, 2018.

¹⁴⁸ There is evidence that stress has a negative impact on birds or mammals, including affecting the activity of the immune system, making them more vulnerable to disease. Cf. N. B. Sassi *et al.*, “Technology and Poultry Welfare”, *Animals*, Volume 6, Issue 10, article 62, 11 October 2016, <https://DOI:10.3390/ani6100062>. Andrew Cunningham also asserts that the impact of stress on bats, but also on birds transported or kept in cages, in tight spaces, for marketing, would be very similar to the same type of stress on humans. See: N. P. Walsh and V. Cotovio, *Bats are not to blame for coronavirus. Humans are*, *CNN*, 20 March 2020, available online: <https://edition.cnn.com/2020/03/19/health/coronavirus-human-actions-intl/index.html>).

as in each and every thing in the known universe, meanings that elevate our minds to the Creator, God being the One to be "through the reasons of things"¹⁴⁹. On the other hand, the living world can also provide opportunities to enhance our virtue. In this regard, St. Maximus refers to the "laws and natural ways of what can be seen," in which man easily finds "the way of teaching that leads to Him"¹⁵⁰. However, this is possible only in the conditions of a mind trained to perceive these meanings, and of a life free from sin, from the passionate connections with the world. Sin and passions are the sources that distort the reception of these fine meanings.

Only "the mind loving wisdom, contemplating in knowledge the world of creatures according to the reason or natural way of life of each", if accustomed to engaging in this knowledge, will receive the "spiritual reasons of things", which, through the effort of the deed, will imprint them (the natural laws that govern nature) in their own "ways of life"¹⁵¹. Christian spirituality is therefore ready to capitalize on all this scientific evidence regarding the intelligent aspects present in the behaviours of the animal world, as part of the rationality of creation destined to be understood and capitalized by man, in the sense of a good life, in harmony with the entire creation, with fellow human beings and with God.

In opposition to this manner, the passionate does not respect, does not learn and does not tailor his actions according to the

¹⁴⁹ The text is present in the third volume of the Romanian Philokalia. Thalassius' question is related to an Old Testament text: "And many brought gifts unto the Lord to Jerusalem, and offerings to Hezekiah, king of Judah. And he rose up in the eyes of all the nations. What are "gifts" and what are "offerings"?, in *Philokalia*, Tome III, Romanian version, Bucharest: The Institute of Orthodox Mission, 2009, p. 243.

¹⁵⁰ Ibidem.

¹⁵¹ Ibidem.

rhythms of the living world, but forces them to fulfill his desires. As Saint Maximus the Confessor writes, “he who transforms by imitation the laws of creatures in his own law is virtuous, filling with reason the movement of those without reason [but characterized by rationality]. And he who transforms, also by imitation, his law into the laws of creatures is passionate, making irrational what is rational”¹⁵².

Obviously, this understanding and exhortation, which concerns the whole living world and our care for it, is a consequence of the faith founded in Revelation, according to which everything around us represents the gift of the Holy Trinity for man. Father Dumitru Stăniloae often reiterates this idea, emphasizing that the whole Creation is a speech addressed by God to man, all being made through the Logos, “in Him, (...) through Him and for Him” (Colossians 1:16).

7 Instead of conclusions, three more spiritual insights

7.1 The slips of the world arise from the spiritual sufferings of man

The small slips, the usual mistakes of life that we make during a day, seem and are, to a certain extent, insignificant. However, accumulated in time and space, connected with each other and with all the other small mistakes that we repeatedly make, over several decades, the disorders can give rise to disturbances on a global scale. The situation is dramatic, as not even experts can escape the limitations of human limitations, affected in various ways by our weaknesses. Even the clearest understandings on various issues can be overshadowed, in the case of experts, for

¹⁵² Ibidem.

example, by the filter of their knowledge¹⁵³. So, even in considerably better circumstances where we know what needs to be done, and we know the causes that trigger a threatening fact (up to a level of expertise), there is a fundamental difficulty that prevents us from acting as we should so as to remove the danger around us and from our fellow men.

In this line of thought, the new coronavirus and the CoVid-19 pandemic could only be a first sign that things have already gone too far. But there are other signs as well. Numerous dangers lurk in today's civilization, dangers that are increasingly drawn to the whirlwind of progress and increasingly insensitive. First of all, it must be said that there are other viruses, some of them also carried by bats, which have already been reported for more than ten years, viruses that have significant potential for triggering pandemics. One of them is the Nipah virus, discovered in some species of bats, which has an important pandemic potential¹⁵⁴. After its emergence in Sungai Nipah (after which its name was coined), the virus spread to pigs and, through them, to humans¹⁵⁵. And, not

¹⁵³ Steven Sloman, Philip Fernbach, *The Knowledge Illusion: Why We Never Think Alone (Iluzia cunoașterii)*, Romanian version, Bucharest: Publica Publishing House, 2017, pp. 302-303.

¹⁵⁴ If changes in the genetic package occur, the Nipah virus could pose a real pandemic danger, according to experts (Cf. S. P. Luby, "The pandemic potential of Nipah virus", *Antiviral Research*, Volume 100, Issue 1, 2013, pp. 38-43, <https://DOI.org/10.1016/j.antiviral.2013.07.011>.)

¹⁵⁵ In 2018, there were approximately 700 cases of infection with this virus, with various symptoms (beside those that were asymptomatic: fever, headache, cough, severe forms such as encephalitis (inflammation of the brain), seizures, coma causing death. The mortality rate was estimated at between 40% and 75%. To stop the spread of Nipah, the Malaysian government slaughtered nearly a million pigs, endangering the entire food industry. The danger was real, given that Nipah spread rapidly in several states. In Asia, after

coincidentally, the emergence and spread of the Nipah virus are linked to the intensive livestock farming¹⁵⁶. Here is what a

1999, 16 outbreaks of Nipah since 1999 have been identified in India, Bangladesh and the Philippines. The authors of the study quoted here show how farms can become real virus factories. However, the slaughter of the animals paid off, stopping the spread of the virus. Interestingly, after a while, it was noticed that no Muslim had contracted the disease caused by Nipah. This observation helped the researchers give up the hypothesis that the virus is spread by mosquitoes. In a short time, the analyses solved the mystery, due to the fact that the Muslim religion prohibits pork consumption, the pigs being later proved to be the intermediary of the Nipah virus in the transmission to humans. Following the identification of the intermediary, it was also discovered that Nipah came from bats. (Cf. M. Doucleff, J. Greenhalgh, "A Taste For Pork Helped A Deadly Virus Jump To Humans", *NPR*, 25 February 2017, available online: <https://www.npr.org/sections/goatsandsoda/2017/02/25/515258818/a-taste-for-pork-helped-a-deadly-virus-jump-to-humans>).

- ¹⁵⁶ In the 1980s and 1990s, Malaysia experienced accelerated economic development, with many families reaching a standard of living that allowed them to cook pork several times a week. Demand for meat increased considerably, with explosive growth in Malaysia's pork industry between 1970 and the late 1990s. The pig population tripled to over 3 million. Obviously, after the Nipah virus, pig farms in Malaysia have become cleaner, but it remains essential that these rules be followed every time, in every place. The conclusion is the same, every time. When we change the way we interact with animals, the authors conclude, we unleash new diseases. As we use the resources of the civilized world to increase food luxury and increase the comfort of life, enslaving nature, we surround ourselves with more and more germs, which prove to be increasingly dangerous. See: M. Doucleff, J. Greenhalgh, "A Taste For Pork Helped A Deadly Virus Jump To Humans", *NPR*, 25 February 2017, available online: <https://www.npr.org/sections/goatsandsoda/2017/02/25/515258818/a-taste-for-pork-helped-a-deadly-virus-jump-to-humans>.
The movie *Contagion*, directed in 2011 by the Oscar award winner Oscar Steven Soderbergh, was inspired by Nipah case studies, considered a successful screening, with a script that rigorously satisfies the scientific perspective on reality, which is rather rare in the world of film productions.

scholar asserted in 2018: "It is very difficult to predict which virus will be the next to spill over into humans, and even harder to predict whether that virus will cause disease," he says. But, given the number of coronaviruses that have now spread from animals to people, he adds, "it seems a safe bet to think it will happen again. We just don't know which virus it will [be], where it will come from, or when."¹⁵⁷

However, there are warnings about other diseases and threats: yellow fever, which, in the face of climate change, has expanded, leaving the Amazon and reaching Sao Paulo and Rio de Janeiro; malaria, which is spreading - aided by the mosquitoes that migrate further and further - to warming regions; ticks, which appeared and multiplied very quickly, in regions of the USA and South Korea where, before 2010, they were not even known;

¹⁵⁷ Cf. M. Schreiber, "A Novel Virus Killed 24,000 Piglets In China. Where Did It Come From?", 4 April 2018, available online: <https://www.npr.org/sections/goatsandsoda/2018/04/04/599179621/a-novel-virus-killed-24-000-piglets-in-china-where-did-it-come-from?t=1591247401612>). The new coronavirus (SARS-CoV-2), says Andrew Cunningham, professor of wildlife epidemiology at the London Zoological Society, is probably the first clear and indisputable sign we receive from nature, about the damage we ourselves do to the natural environment, and that these damages can be fatal to humans. He also points out that this can happen again, for the same reasons. There are tens of thousands of viruses, says Cunningham, waiting to be discovered, and what needs to be done is a precise identification of critical places, which can facilitate their transmission and spread from the wild area to the population. They need to be identified and managed in such a way as to prevent things from degenerating. This, says Cunningham, will be the most effective way to protect people. (Cf. N.P. Walsh and V. Cotovio, "Bats are not to blame for coronavirus. Humans are", *CNN*, 20 March 2020, available online: <https://edition.cnn.com/2020/03/19/health/coronavirus-human-actions-intl/index.html>).

the Zika virus¹⁵⁸, which, at the time of its discovery (1952), was known only in Uganda, and which, as some observations claim, has spread, helped by the ever warmer climate, throughout the African continent, but also on other continents¹⁵⁹.

At the same time, many other authors reveal many other major wounds and imbalances that accompany the progress of our civilization, also born of the vulnerabilities of our own judgments and actions. In addition to the social gap between the rich and the poor and the problems caused by irrational practices with the species of the living world, many other challenges overshadow the face of civilization: the destruction of natural habitats, the acidification of oceans, the drinking water crisis affecting wider regions, rising sea levels and oceans, air, water and soil pollution, the over-consumption of natural resources, far beyond nature's regenerative capacities, the waste - reaching alarming levels, the irreversible destruction of biodiversity, the threat of many living species to extinction, the hyper -consumption scientifically maintained by an increasingly persuasive neuro-marketing, taking up ever more and better the attention and life time of consumers, denying access to their inner life.

Obviously, there are humanitarian threats and problems arising from political and military issues, such as armed conflicts or

¹⁵⁸ David Wallace-Wells mentions such threats *The Uninhabitable Earth. Life after Warming (Pământul nelocuibil. Viața după încălzirea globală)*, Bucharest: Litera, 2019, pp. 114-119.

¹⁵⁹ Data show the spread of the presence of Zika virus in the last fifty years, as follows: Africa and Asia (1951 - 2016), Micronesia (2007), the islands of Oceania (2013 - 2014) and the Americas (since 2015). Cf. M. K. Kindhauser, "Zika: The Origin and Spread of a Mosquito-Borne Virus", *Bulletin of the World Health Organization*, Volume 94, 2016, pp. 675-686. <http://dx.doi.org/10.2471/BLT.16.171082>.

humanitarian crises caused by refugees. However, there are also dangers arising from the irrational use of technological powers. Here are some of them, the robotization of industries, on a large scale, a process that could take man out of work; the digitization of playful and pleasurable devices, which offer ever stronger sensations, more and more intimately coupled with our cerebral mechanisms, multiplying addictions; the immense potential of synthetic biology, which announces the possibility of changes in the kingdoms and species of the living world, through creations without precedent in the history of the earth; the technologies of human physiological augmentation, which promise to change the species, through hybrid solutions making the junction between living tissues and synthetic structures capable of ensuring our lives for hundreds of years.

Given these dangers that do not affect us yet, that are not yet present in the realm of real life, but that overshadow the future, one can see that it is not the evil we are facing that is the greatest. In fact, above all the evils we go through, but also in the midst of those that might follow, there is a greater evil; it is not that, knowing in advance about life's threats, we do nothing to avoid them. The greatest evil would be not to foresee the good lessons, hidden in what has happened to us and are happening to us, and to miss the essential understanding that this evil is caused by our own views and actions. Otherwise, how will we deal with the many evils that threaten the future of our survival?

7.2 The autonomous humanism cannot heal the spiritual wound of man

The state of the world nowadays and all its problems show us, time and again, that a simple humanism cannot stop all these evils. How could it if it has witnessed their emergence? "If we remain at the humanist level, writes theologian Panayotis

Nellas, then we limit the development of both the world and man to the limits of space and time." Except that, in this case, "the functioning of nature is overturned and distorted. The result is that even the best intentions of man get stuck in the process of their achievements in this deviant functioning and becomes alienated. Therefore, he asserts, in this overturned order of things, the evil done "is not accidental, but natural and inevitable"¹⁶⁰.

The disorders of the world spring from our sins. The Holy Apostle Paul made this radiograph known long ago, in a few memorable words: "Now then it is no more I that do it, but sin that dwelleth in me. For I know that in me (that is, in my flesh,) dwelleth no good thing: for to will is present with me; but how to perform that which is good I find not. For the good that I would I do not: but the evil which I would not, that I do." (Romans 7, 17-19).

There is, therefore, a fundamental impotence of the human being: as long as he does not put his own powers in order, through ascetic exercise, he will not have full power over the world, in an organizing work for it. Living under the auspices of sin, driven by passions and without a spiritual project that puts his movements and life in order, man can only have at hand an overturned, disordered world, which will also have the deformed face of its own life¹⁶¹. In such a world, with laws and

¹⁶⁰ „Cadrele tehnologice occidentale ale vieții și Biserica Ortodoxă” (“Western technological frameworks of life and the Orthodox Church”), in: *Orthodoxy - divine-humanism in action (Ortodoxia – divino-umanism în acțiune)*, Romanian version, Sibiu: Deisis 2013, pp. 232-233.

¹⁶¹ In the content of Christian thought, we find many places with such observations. Theologian and philosopher Christos Yannaras asserts that the way we deal with the sentient world reveals to us how we

movements disturbed by his irrational slips, in the absence of a spiritual life that illuminates his decisions and paths to follow, his relations with the world are overturned. The condition of man and of the world is marked by a bitter antithesis: his actions in it, although they seem carefully weighed and well-intentioned, end up accomplishing the perfectly opposable goal, ultimately fulfilling the opposite of what was pursued: "The sincere revolts for freedom, writes Panayotis Nellas, can only lead to enslavement, the large scale development of production to abundance, the preservation of peace to the increase of weapon demand, that is, the preparation for war"¹⁶². Obviously, in the most general way, one can see in all these how all human

understand the environment, which we receive rather as "a dead matter, a consumer good, an object that serves to satisfy its desires." Cf. Karl-Christian Felmy, *Dogmatic ecclesiastical experience. The renewal of contemporary Orthodox theology, (Dogmatica experienței ecleziale. Înnoirea teologiei ortodoxe contemporane)*, Romanian version, translated by Fr. Ioan Ică, Deisis, Sibiu 1999, p. 182. Raised without any leaf of grass, without respite, the animals are no longer alive, they are carcasses intended for consumption. Nature, writes the same author, has become only a place from which we extract the sap of pleasure and prosperity, "being able to constrain it as much as possible, to satisfy these demands". "The poisoned atmosphere of the industrial regions," Yannaras writes, "the dead soils, the waters full of impurities and decomposed matter directly reveal a certain error in man's way of dealing with the universe and the failure of his attempts to subdue physical reality. Obedience succeeded, through the power of the intelligence materialized by the machine, but today, it proves to be a coercion of nature and a deterioration of it, a coercion which, without a doubt, represents a deadly threat to man. Because man's life and man's truth cannot be separated from life and the truth of the world around him. The relationship is given and it is inevitable - any falsification or violation of this relationship means a distortion of the existential roots of man." See: Christos Yannaras, *Person and Eros (Persoană și Eros)*, Romanian version translated by Zenaida Luca, Bucharest: Anastasia Publishing House, 2000, p. 119. This ultimately threatens our very existence.

¹⁶² Panayotis Nellas, *Omul – animal îndumnezeit*, p. 125.

efforts, no matter how tense, fail to escape the shadow of imperfection, the erosion of contradictions, the shortcomings of its own condition.

7.3 From nothingness to holiness. The inner solution

We are here in another place where the actuality of the spiritual perspective is glimpsed at. Because it emphasizes the importance of inner edification, which is also the only growth that can support the sustainable progress of the world. As long as the source of the world's evils is internal, their solution must begin there.

In a dark time of war, in 1944, Father Dumitru Stăniloae wrote in the "Telegraful Român" (The Romanian Telegraph) that humanity has learned that it cannot expect anything from its technical progress in order to achieve happiness. In fact, he writes, "man's happiness depends on the change, on the improvement of the soul, on the agent who uses the discovered and captured forces of nature." Mankind's concerns must turn towards the soul, which has a much more important role in protecting human life from the great storms and calamities that haunt it¹⁶³. Olivier Clement formulated a similar idea, showing that the European civilization has no other way to save all its acquisitions than by assimilating them in its deepest layers: "those aspects that have survived in so-called Christian societies, either crumble or internalize"¹⁶⁴. We have no choice

¹⁶³ Dumitru Stăniloae, „Civilizația și sufletul” (“Civilization and soul”), in „Telegraful Român” (The Romanian Telegraph), XCII, no. 28, 9th July 1944, pp. 2 – 3, *apud* Dumitru Stăniloae, *Cultură și Duhovnicie (Culture and Spirituality)*, vol. III, articles published in „Telegraful Român” (1942 – 1993), Bucharest: Basilica, 2012, p. 590.

¹⁶⁴ Cf. Olivier Clement, „Nădejile mele pentru lumea noastră” (“My hopes for our world”), in: *Repere spirituale pentru omul de azi (Spiritual*

but accept that "the civilized world is pushed ever harder towards choosing between nothingness and holiness, or as Pavel Florensky wrote, between madness and the Trinity"¹⁶⁵.

We can see here as well that, in order to minimize the damage done by our limitations and vulnerabilities, we should give up unlimited confidence in the powers of reason and technology, and open ourselves to the old spiritual experience of the forerunners, set within the priceless pages of wise living and the needs of learning it. An impressive number of improved people, emblematic figures of holiness, spirituality and philosophy, have gathered throughout history a huge volume of human experience, impossible to exhaust, leaving evidence of how to fight their own sins, limitations and human weaknesses. Their experience, despite being as old as centuries, shows the possibility of overcoming human shortcomings and imperfections. Therefore, from a Christian perspective, it is impossible to imagine a way out of the many, extensive and complex problems of civilization without spiritual landmarks, without faith, without improved life in God. Here are some recommendations that can welcome the rational approach of the contemporary man: gathering the spirit from what is scattered outside and the recourse to interiority; the renunciation of selfish tailoring and ascetic practice and, last but not least, the

Landmarks for the Contemporary Man), Bucharest: Basilica, 2011, p. 79.

¹⁶⁵ Ibidem. For this, according to Olivier Clement, Christianity can value the whole human experience. There is a need, he writes, "for a renewed Christianity that integrates the Asian disciplines of the inner life and cosmic feeling of archaic religions in open dialogue with scientists, increasingly discarding their Promethean attitude." Cf. Olivier Clement, "Nădejde mele pentru lumea noastră" ("My hopes for our world"), in: *Repere spirituale pentru omul de azi, (Spiritual Landmarks for the Contemporary Man)*, Bucharest: Basilica, 2011, p. 79.

weakening of presumptuous claims about the powers of human reason.

Otherwise, problems of this magnitude, as evidenced by the pandemic we are going through, are difficult to solve, because we are talking about a global dimension, but also because there are many issues at stake that should be rethought and deeply renewed, in our way of being, but also in the mechanisms of civilization. In fact, beneath all the new problems facing mankind are the same old causes of the human spirit. The reins of the world, no matter how ample its movements, are, after all, in the inner man. Without cultivating interiority, the calls and cries of the world cannot receive an answer. Without divine light, the humanism of the autonomous world will be exhausted, ground by sin, a sin that gnaws - in the absence of the effort to sanctify life, all the roots of human endeavours. Therefore, no matter how old-fashioned or scandalous it may sound, the Christian perspective dares to state again and again that without rediscovering and capitalizing on the spiritual dimension of human life, the world will not be able to have a good future.