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**The post-corona world.
A research agenda**

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The post-corona world.

A research agenda

I. A new global sovereign and the end of the two cultures

The post-corona world is not a world without the corona virus. Yet, it differs fundamentally from the world we have known before. Since 2020, the corona pandemic has generated a historic global turning point of its own kind.¹ The global pandemic broke out like a biblical visitation. It has shaken the lives of many and the coexistence of everyone around the world like few events before. The pandemic did not follow on from an ongoing global conflict. The pandemic was not the event everyone was waiting for. Far-sighted prophets had predicted that a global pandemic could break out at any time. However, human beings in general dislike listening to prophets, and politicians in particular, dislike voices of warning. Hence, the corona pandemic caught humankind unprepared. The virus spread around the globe at the rate of the rotation of the earth. Corona became an unprecedented world media event that opened a new era in world history. In a short period of time, the word "corona" has probably been used among people of all languages and ages faster than any other scientific term. There is a world before and a world after corona. Much of what this sentence means will be revealed over time.

The corona pandemic has pressed the world together and at the same time it has torn it apart. Practically every country and human society

1 See: Michael Corsten/Michael Gehler/Marianne Kneuer (eds.), *Welthistorische Zäsuren. 1989-2001-2011*, Hildesheim: Georg Olms, 2016.

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has been affected. Initially, only Antarctica and outer space were spared from the corona virus. Eventually, only a few Pacific islands were able to close their borders in time and avoided importing the corona virus. People in all regions of the world were infected, died and were scared. The health shocks were instantly overlaid by economic and social consequences. The long-term details of political and cultural consequences remain unpredictable. Without being a human-made event, the corona pandemic became a world event. One should be careful with superlatives. The picture that Apollo 8 took of the earth on December 24, 1968, made us humans discover the world as a small blue and fragile-looking planet. The corona experience has renewed this sense of unity and vulnerability like no other event and no other picture. The big difference: The picture from space in 1968 captured the event of a moment. Corona became a new and rather long-term global sovereign who determined the state of emergency - worldwide and for a longer period than most people would have liked. That is why the corona pandemic is a turning point opening a new era of human history. To complete the paradox: Unlike the moon, the corona virus remained invisible.

Throughout the 20th century, the term “world” never implied “the whole world”. World war, world economy, world order – never ever were all societies, countries and regions included in what was colloquially coined a world event. The corona pandemic of 2020 is the first ever and genuine “world” event. As such, the corona pandemic has terminated a transition period in human history. Corona, the new global sovereign, relates all individuals, societies and countries to the world at large. Without protection against the virus for all humankind, no protection works for anybody. Never before has such a phenomenon been experienced by humankind. The post corona-world redefines the meaning of interdependency. The corona pandemic marks the genuine beginning of the global era.

The importance of the corona pandemic, its causes and its effects will occupy academic research for a long time. The academic classification of the corona pandemic and its multiple effects will only succeed

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through transdisciplinary networks. In the coming years, research on this topic will line up like new epidemic waves. One hype will replace the other, just as one crisis report chased the next in the midst of the crisis. The human brain is a multi-level system and so is the world in which we live. Therefore, we can separate different levels of research, just as a doctor has to diagnose a patient in all its complexity in order to provide a complex therapy. To understand where the post-corona world could head, a multiple diagnosis is essential. It helps to understand what we only see in parts once an event unfolds. Even after death, a precise dissection is carried out during post-mortems. One should not stretch this comparison too far. It would be hasty to assume that the post-corona world would be a post-globalization world. As much as Mark Twain pointed out that the news of his death reported in various newspapers was premature, it would be premature to assume that only a skeleton would remain of globalization once the corona pandemic is over. When in doubt, the good old saying also applies in this case: Those said to be dead live longer.

The globalized world will continue. However, it will be more realistic and more serious. The post-corona world will have to be a world of permanent and intelligent learning for all. The aftermath of the pandemic will not pass as quickly as its manifestations. Now, humankind knows that a natural disaster can strike all of humankind at the same time. We humans have to learn to live with the knowledge that after corona other globalized natural disasters are likely to happen. Even the corona virus will not disappear.

Back in 2001, historian Michael Gehler coined the term "contemporary history in a dynamic multi-level system".² The academic processing of the corona pandemic will prove the accuracy of this perspective. Only joint efforts by social sciences and natural sciences will succeed in understanding the multiple dimensions of the corona pandemic and its impact on the post corona world. With the

2 Michael Gehler, *Zeitgeschichte im dynamischen Mehrebenensystem. Zwischen Regionalisierung, Nationalstaat, Europäisierung, internationaler Arena und Globalisierung*, Bochum: Winkler, 2001.

outbreak of the corona pandemic, scientific assessments became more important than ever before. At times, natural sciences entered a hegemonic position with regard to the interpretation of the impact and possible consequences of the corona pandemic. Over the course of the corona pandemic, it became increasingly clear that scientists, like any other human group, could arrive at different assessments and recommendations. Objectivity does not exist, even in the natural sciences and in spite of their methodological certainties. A coherent scientific study of the epochal impact of the corona pandemic will only succeed through a continuous interaction between measuring natural sciences and interpretative humanities and social sciences.

The corona pandemic is a more than welcome opportunity to overcome the scientific separation of the “two cultures”. With his seminal 1959 study, British physicist, manager, diplomat and writer C.P. Snow seemed to have irreconcilably separated natural and social sciences for all time.³ However, neither natural sciences nor social sciences and humanities alone can provide the necessary and comprehensive insights which humankind needs to learn from the 2020 corona pandemic. By all standards, the corona pandemic refutes the separation of the sciences, which Snow regarded as inevitable and irrevocable. Any scientific approach that deviates from the multidimensional unity of the sciences is responding incorrectly to the corona pandemic.

In this paper, eight levels of research will be identified as relevant in the post corona world. First, four levels related to soft issues will be discussed. Second, four levels related to hard issues are addressed, completed by an assessment of the corona policy of the European Union. The paper ends with a reflection on the question of resilience and fragility as the human way of dealing with “unknown unknowns”.

3 C.P. Snow, *The Two Cultures*, Cambridge: Cambridge University Press, 1959.

II. Soft issues in the post corona world

Research level 1: Moral dilemmas.

The first landing on moon in 1969 could have taken place without television. Yet, only with television did Neil Armstrong's sentence become a powerful icon: "One small step for man, one giant leap for mankind". Far more vigorously than in 1969, the corona virus has fueled the "Armstrong paradigm": A small event for many individuals, but a giant event for humankind. Every minute of the day, Internet and TV stations, radio and print media brought every conceivable message to the home offices and quarantine locations of humankind. While pictures of the moon were uplifting, news about the corona virus made people fearful or depressed. The corona pandemic was a never-ending slow-motion global crisis. Initially, the daily updated data from Johns Hopkins University (JHU) were impressive.⁴ The longer JHU published its findings, the more depressing they became. The processing of this data by the media around the world provides material for many reconstructions and theories about the events themselves and their classification as the subject of the media crisis. One of the statistics that Johns Hopkins University kept so diligently was the least distributed: the number of people recovered. The world wanted to hear the force of the numbers of infected people and the number of dead. These figures triggered fear and compassion. Comparisons with other natural disasters and afflictions in human history were soon at hand.⁵ The corona pandemic has contributed to the statistics of fear: The media coverage of the pandemic centered around the force of the large number while the fate of the individual who suffered or died from the corona virus often disappeared.

4 Johns Hopkins University and Medicine. Coronavirus Research Center. COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) online at: <https://coronavirus.jhu.edu/map.html>.

5 E.g. the Justinian pestilence, the black death pestilence, the Spanish flu. For none of these powerful events do we have exact data. Estimations of death figures are excessively broad.

If counterfactual models were possible, they would certainly produce interesting insights about the events themselves and their classification as a subject of a media-driven crisis. Counterfactual models would serve as a variant of the premise of philosopher John Rawls, who viewed the “veil of ignorance” as the decisive condition for a justice-driven human society.⁶ What, if the world had not known about the corona virus before it could be defeated with the help of a vaccine and, possibly, a medical therapy? How would the relationship between unnecessary suffering and unavoidable suffering have been under conditions of a “veil of ignorance”? How would the balance have been struck between the value of protecting life through the maximum concentration on health measures and the value of the complex human well-being beyond health matters, including basic constitutionally guaranteed freedoms? Asking this question is no indication of cynicism in the light of concrete human suffering. Compassion must focus on the victims of the corona virus, but likewise on those suffering from its social, economic and psychological side effects. To show respect for the comprehensive complexity of human suffering is a lesson the corona pandemic has taught. Many issues related to this complex agenda of human suffering point to moral dilemmas. The longer and more complex the consequences of the corona pandemic became, the more moral dilemmas surfaced.

Medical professionals who are committed to protecting life had always known the problem of “triage”, that is the moral dilemma of treating a patient whose life can still be saved over another patient who is less likely to survive. For humankind around the world, such moral limits slowly came into focus with the corona pandemic. In the course of 2020, “excess mortality” became a widely used term. The strange word implies that for a certain period of time the number of deaths is above statistical average. Average mortality tables were of course already available when the corona pandemic broke out at the

6 John Rawls, *A Theory of Justice*, Cambridge, Mass.: Belknap Press of Harvard University Press, 1971.

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beginning of 2020.⁷ “Excess mortality” occurred in variants across countries and for a short period of time worldwide. On average, the vast number of corona victims died at a very senior age, often facilitated by earlier diseases. Among the ethical dilemmas to be studied is the question why a more rigid protection of the most vulnerable groups in each society did not take place immediately. Instead, most countries favored general forms of shutdown. This led to “excess suffering” beyond physical health with psychological breakdowns, social costs or economic closure of businesses and lost jobs. “Excess mortality” cannot morally be weighed against non-health related “excess suffering”, but the notion of suffering needs to be put into perspective. The value of health cannot be so absolute as to not recognize other forms of pain and suffering. This fact does not in any way to play down any human pain provoked by the power of the virus, the severity of many illnesses and the shock-like realization that health systems could collapse. Yet, simply looking at the absolute number of people who died, directly or indirectly of corona, was not enough to address the moral dilemmas related to matters of life and death, pain and suffering. Future research will have to conduct this in-depth work on moral dilemmas.

A great absence throughout the corona pandemic was depressing: Where were the moral and religious agencies who offered spiritual help and consolation to a saddened humankind? Hardly any religious leader were vocal with sensitive contributions of compassion reformulating the faith-based belief that death is only the end of dying, but not the end in itself. Even for most religious leaders, death remained a taboo, coupled with abstract statistics and figures. The

7 On a daily basis, on average 150,000 people die worldwide (Source: <https://www.weforum.org/agenda/2020/05/how-many-people-die-each-day-covid-19-coronavirus/>). Almost 60 million people died in 2019. In Germany, on average between 2,000 and 2,500 people aged above 65 years die per day (Source: https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/_inhalt.html.) In 2019, 945,000 people died in Germany. For details on excess mortality during the corona pandemic see: <https://ourworldindata.org/excess-mortality-covid>.

corona pandemic would have required an ethic of suffering, even an ethic of the fragility of life, of its finitude, in order to address the fear of the force of the unknown. It would have been the obligation of religious leaders of all creeds to address this search for compassion in a situation where humankind, religious or non-religious, was helpless and sad. The most moving public ceremonies of commemoration were organized by states and politics (i.e. in Spain in 2020 presided by King Felipe and in the US in 2021 presided by President Biden).⁸ Spiritual contributions of how to cope with the phenomenon of human fragility were scarce. Religious leaders of all creeds left a noticeable void for the faithful and a helpless humankind at-large. Media, scientists and political leaders inundated humankind with case numbers, incidence figures and vaccination curves. The increase in empirical knowledge often left an even greater degree of confusion and uncertainty. Scientific facts triumphed over ethical-moral contextualization, psychological explanation or religious help to accept the unacceptable. Transdisciplinary post-corona research, which will deal with these and certainly more deficits in dealing with moral dilemmas, must include theological perspectives. Here is a sphere for an urgent inter-religious conversation between Christians, Muslims, Jews, Hindus, Buddhists and representatives of other religions.

Socio-psychologically oriented media research, as well as clinical psychology, will have to deal with the effects of continuous global reporting, including by social media, on the emergence, reaffirmation and globalization of fear and its manifestations in all too many individuals. It will not be enough to reduce the media question to comparative studies about the ways in which open and autocratically governed societies have reacted with their usual reflexes. Nor will it be sufficient to use the dictum of transparency as the only reference

- 8 When Pope Francis published his encyclical “Fratelli tutti” on October 4th, 2020, his focus was on the protection of life and all sorts of common topics of the time. Unfortunately, even the head of the Catholic Church did not provide substantial reading about an ethic of suffering and spiritual help in the midst of the existential fear the corona pandemic had created.

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point. Certainly, transparency is a basic staple for a globally active, open-minded world media society. A self-critical reflection on the media coverage of corona must enter the research agenda. Even if it is inconvenient and unpleasant, a sober question has to be discussed: Which media were part of the solution and which media were part of the problem in widening the gap between hope and fear, expectation and mistrust in the management of the crisis? Did the media of the world help humankind and its decision-makers to alleviate the profound moral dilemmas present in the crisis or did they only exacerbate them?

Research level 2: The fear factor.

The fear of the consequences of self-generated economic effects naturally varied in different countries and regions of the world. Likewise, the examination of the experience of restrictions on fundamental freedoms varied in intensity throughout the world. Life under conditions of the state of emergency which corona generated has raised old research questions in a completely new dimension: How long can people accept their fate in situations of being locked in? Early emotional outbreaks indicated the potential of this concern. Hoarding and business looting, outbreaks from prisons and refugee camps, outbreaks of violence and police countermeasures, demonstrations and conspiracy theories were soon registered. The range of further reactions increased steadily. While the first wave of the corona pandemic and related restrictions on daily life hit humankind like a tsunami, the second wave of restrictions related to the corona pandemic challenged the ability and limits of human patience. A third wave might lead to unpredictable escalations.

A basic set of questions for any retrospective and comparative social-psychological research might include the following aspects: How do humans deal with ubiquitous fear, which is rampant as a collective probability? Where are the limits of human resilience in the face of fear, isolation and uncertainty? What distinguished the psychological

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effect of the corona pandemic worldwide from previous catastrophes? Was the missing vaccine really the most important explanatory factor?

Research on anxiety and fear in all its shades will be in demand for a long time. Research will also have to include questions of how they arose very differently around the world as result of different living conditions and lifestyles. For example: Was the argument true, according to which younger people are more easily ready and more permanently satisfied with a slower and simpler life post corona? Did young people really see the effects of the crisis as beneficial in order to live more mindfully and with less consumption? Which segment of the world's young generation was meant with such theses? The behavior, but also the psychological dispositions of young people in affluent societies are likely to have been fundamentally different from those of young people in poor and emerging societies.

How did the corona pandemic affect daily life where social distancing and basic hygienic requirements cannot be observed, even with the best intentions? Think of the favelas of Brazil and the homeless in India, the townships of South Africa and the slums of Manila or Cairo. The purposeful initial optimism over the power of the virus, or even negligence of the pandemic, of some political leaders in societies with a high degree of social division was understandable. In light of the social fragility of divided societies, prime concern for the economic effect of a shutdown was no surprise. Apocalyptic fear of unemployed and starving masses, moving past collapsed health facilities to the residential areas, banks and shops of the affluent were not purely exaggerated. The painful unrest in the United States throughout the summer of 2020 demonstrated how quickly even the world's strongest countries can shake. Fear of uncontrolled masses of frustrated people was certainly also an element in the motivation of the Chinese leadership for initially obscuring the corona virus before rapidly resorting to a rigorous shutdown of daily life in Wuhan and elsewhere.

It took a long time into the crisis before most countries discovered the idea of proportionality in their respective reactions. Even then,

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proportionality became immediately a matter of second-order trade-offs between freedom and security. The weighing of interests between life and death was often treated like a taboo by media and policy makers alike. The death factor was considered as a simple black and white zero-sum-game: The justified will to live contrasted with an omnipresent, diffuse and destructive fear to die. Socio-psychological research should address the question of whether and why feelings about suffering, dying and death differ across the societies on earth. Did societal differences in the way death and suffering are dealt with lead to different reactions to the fear of corona? Do religious and more secularized societies differ in their understanding of suffering and death? How does the demographic composition of a society affect the approach to the corona pandemic? Were “ageing” societies more cautious and worried, compared with “young” societies? Beyond the matter of life and death, it is inevitable for future sociological research to grasp life in its totality: A dignified life free of fear includes not only medical data, disease reports and death rates, including figures about excess mortality. It also includes the emotional consequences and socio-psychological effects of the corona pandemic. Suicide rates, domestic violence, alcohol consumption or other forms of a self-destructive nature need to be studied. It would have been helpful to contrast the statistics of new incidences of corona with the statistics of social, economic and psychological suffering due to the measures taken in fighting the statistics of corona outbreaks.

Psychological as well as moral-philosophical and theological research has to address matters related to conflicting moral objectives. At the height of the corona pandemic, there was hardly any space for reflection of that nature. Future transdisciplinary research has to deal with these forgotten and highly sensitive dimensions of the corona pandemic. Are there limits to the individual protection of life if the individual and collective price, not only, but also in terms of health, is possibly higher than the actual or assumed protection of life of those who have been or could only have become victims of a hitherto unknown health hazard? Non-physical dimensions of human life on

feelings of fear and the limiting effect on human happiness need to be studied from a comparative perspective. When all spheres of life are perceived in relation to restrictions on constitutionally guaranteed fundamental freedoms, economic consequences and social restrictions cannot go unnoticed. Human suffering is not only a health issue. Human suffering, due to the non-proportional lockdown of economic activities has grown continuously, the longer the pandemic has lasted. Conflicting moral objectives have become evident during the corona pandemic without a convincing solution. The moral conflicts leading to non-health related human suffering during the corona pandemic must be studied with prudence and sensitivity. This research should certainly go beyond the simplistic approach of framing blame-games against decision-makers and their behavior in the middle of this unprecedented crisis.

Finally, a cultural aspect at the end: In the post-corona world, resourceful and imaginative thriller authors are sure to publish exciting titles.

Research level 3: The question of guilt.

Causes of and guilt for the corona pandemic touch various aspects. For years, far-sighted researchers had warned, in vain, that the outbreak of a global pandemic was only a matter of time. They will not be happy that their predictions were not taken seriously. However, mechanisms of politics usually only take effect when a crisis has broken out. In acting so, the various regimes of this earth do not differ fundamentally. The fire brigade is only alerted when there is a fire. This also applies to anticipated natural disasters.

With regard to hygiene matters, different behaviors have always existed around the world. Religiously charged rules relating to hygiene and health have always meant to curb human negligence or to sanction misbehavior morally. Pre-modern societies have a priori problems in enforcing basic hygiene rules. Cramped and poor living conditions make elementary social distancing difficult. Regular hand washing requires regular access to running water. In modern industrial

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societies, on the other hand, hygiene rules are often regarded as unimportant. The expectation of falling victim to a pandemic is usually not very strong. Pandemics seemed to break out only in poorer countries. The corona virus has shattered the illusion that pandemics and existential health threats are only the concern of poor societies in the global south.

For all countries in the world, the causes of the corona pandemic hold a common yet unpopular lesson: The proximity of people to animals, whether dead or alive, promotes the dissemination of diseases and the outbreak of pandemics (zoonotic diseases). Humans have always been the weaker creatures in the chain of transmission of new infections. The proximity to farm animals in agrarian societies, the consequences of the exponential spread of domestic animals in western and modernizing societies, but also ecological changes with effects on biodiversity and animal habitats need to be studied more honestly as potential seedbeds of a pandemic.⁹

Unsurprisingly, the loose handling of dead bats in a Wuhan food market is likely to have led to the spread of the corona pandemic. The fact that the EU has made phyto-sanitary standards in slaughterhouses and food companies a criterion for the admission of new member states has been laughed at for a long time. Today, it is common knowledge that only the highest phyto-sanitary standards can protect the whole world from new ways of transmitting viruses and new diseases. This is all the more important as human interactions have increased exponentially around the world because of globalization.

Among the necessary basics to be learned from the corona pandemic experience, is the insight that pointing the finger towards Wuhan and China will not help to prevent future outbreaks of pandemics. The bundle of causes and aspects of guilt cannot avoid questioning the role and behavior of China in connection with the immediate outbreak of

9 Laudable early exceptions: Jared Diamond, *Guns, Germs and Steel. The Fates of Human Societies*, New York: W.W.Norton, 1997; David Quammen, *Spillover. Animal Infections and the Next Human Pandemic*, New York: W.W.Norton, 2012.

the corona pandemic. Such a critical assessment of China's initial reactions to the outbreak of the corona virus is in no way about conspiracy theories or sweeping prejudices. It must be permissible to ask how systemic realities in China - both in terms of food hygiene and in terms of news transparency in December 2019/ January 2020 - played a role in the explosive spread of the corona virus. It comes as no surprise that these questions add to critical perceptions of the Chinese political order. However, the direction of any discussion on guilt should be meaningful and constructive.

The prime insight must begin with the realization that the world-wide strengthening of health systems, enhanced preventive disease control, and affordable global access to vaccines for all of humankind is of the utmost importance. Nobody can feel safe until everybody is safe. Rigorous phyto-sanitary standards and consistent improvements in disaster control and sanitary practices around the whole world are further elements of the only reasonable answer. Latrine construction in India or in rural Africa, but also in the inner cities of the increasingly urbanized world, access to running water and permanent basic hygiene education will remain elements of a survival program for mankind in a world of unfinished globalization. In the industrialized countries too, serious deficits in preventive disaster control have apparently accumulated over the years prior to the outbreak of the corona pandemic. In industrialized countries, very sober lessons have to be learned, too. They relate to preventive disaster control, enhanced facilities for vaccine production, and better, speedier and fair global distribution systems of vaccines in case of future pandemics.

The question of who is to blame for the corona world crisis requires multi-dimensional processing and research-led questions, on which social and natural scientists have to work together, as independent as possible from political influence and supported by journalists and witnesses. The question of guilt is only constructive if it is immediately transformed into the question of what the world can learn from past failures. The next epidemic is likely to come faster than any

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sensible punitive expedition against those allegedly guilty of the outbreak of the corona pandemic.

Research level 4: Humanity or tribalism?

Never before had a potential threat to human life had such a global effect. This relates to the immediate as well as the indirect and long-term effects of the corona crisis. In the midst of the crisis and its subsequent waves, it remained open as to what only long-term research would be able to understand and answer: Would the unique experience of human commonality in the threat of a new virus give rise to a surge in humanity, possibly even in actionable solidarity? Or would the retreat into tribal existence be promoted? The demolition of humanitarian ideas in favor of atavistic and Darwinian tribal behavior, for which the modern nation state offers a perfectly legitimate framework? In his famous study “The open society and its enemies”, Karl R. Popper reflected in detail on the dichotomy of tribalism and humanity.¹⁰ Popper wrote in the mid-20th century against the background of the powerful ideologies of communism and National Socialism. These times are fortunately gone, but the interpretation of the corona pandemic includes ingredients, which serve as a surrogate for new ideological thinking. This includes not only the interpretation of the corona pandemic but also the management of the crisis and its legitimacy. Radical refusal of the corona threat sometimes stretched in support of a view, which labeled government activities as dictatorial, no matter their legal and constitutional legitimacy. Tribalism or humanity? Darwinism or global cooperation? The sharpness of the question immediately points to the ideological dimension of the corona challenge. It should direct our attention to political interpretations and intellectual appropriations of the corona world crisis.

10 cf. Karl R. Popper, *The Open Society and its Enemies*, London: Routledge, 2002 (original 1945); Ludger Kühnhardt, *The Global Society and its Enemies. Liberal order beyond the Third World War*, Cham: Springer International, 2017.

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The answers remain open for the time being. However, the fault lines were already evident in the middle of the corona crisis. As every country called its citizens back home, it was evident who alone would be able to help when existential matters were at stake: the own state. Instinctive first reflexes were corrected. Yet, those who only wanted to manufacture vaccines for their own population or who prohibited the export of medical protective clothing or vaccines showed what to expect if another even more dramatic pandemic should occur. Those who let their employers down or, conversely, their employees or their landlords and customers, showed what fear had made of them in no time. This intuitive behavior, owed to the sudden shock of an unexpected crisis, did not have to cause permanent indissoluble doubts about the usefulness of human and political forms of cooperation. Yet, it had to be studied by sociologists and social anthropologists.

Symptoms of a new Darwinism were visible around the globe. In addition, false reports were launched and conspiracy theories spread. Some of the most massive mutual accusations and unproven allegations strengthened tribalist attitudes of all kinds. All of a sudden, anyone who had doubted the usefulness and meaning of globalization felt confirmed. Critics of globalization saw a desired upswing in favor of their attitudes. Paradoxically, those who hoped for humanity and global coexistence felt encouraged, too. They were ready to fight the virus in order to save the world. The “war” metaphor used by some politicians should lead to research-based reviews of the function and effect of such rhetoric. Fact of the matter was; the invisible little virus could not be dealt with like any other object of possible social engineering. Politicians, who like to take care of something, had to accept that it was the virus taking care of humankind and the usual political methods. The post-corona world would become a world of struggles for narratives and interpretations of the epochal break. Symbolic metaphors and comparisons, such as the Lisbon earthquake in 1755, the Spanish flu after the First World War or the Great Depression in 1929 in the run-up to the Second World War, were mentioned as points of reference. Obviously, political thinking and

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new forms of ideology formation could not be stopped, not even in times of a virus. It will take long-term research to track down the usually meandering paths of such thinking.

On the other hand, global efforts to organize a common human response to the corona pandemic were laudable. Initiatives by the World Health Organization (COVAX), fund raising by the European Union and by the G7-Group of Countries demonstrated good will. These efforts were definitively not enough to respond to the need for a speedy, worldwide and equitable distribution of anti corona-vaccine and medical therapy. Everyone knew that nobody around the globe would be truly safe until all human beings were vaccinated and safe. Living with corona beyond the imminent pandemic would possibly require multiple vaccinations over many more years to come. Planning and implementing such a huge public health challenge was tantamount to re-thinking global governance.

The corona pandemic raised concern about the future of globalization. Would it be slowed down permanently? Or would an already existing resentment in the West vis-à-vis China increase, leading merely to a certain “de-Sinization”? Would such a strategy work at all without being self-defeating for the West? A general decoupling of supply chains connected with production processes in China seemed unlikely. Which countries could afford a stronger focus on autarkic economic concepts at all? The overwhelming majority of countries around the globe have little or no room for maneuver, neither in the sphere of medical supply nor in any other economic sector. Autarkic reactions to the first truly global pandemic would be a recipe for further disaster. The ideological struggle between national preferences, a tribalism tailored to the modern world and improved forms of global cooperation, a functioning multilateralism, is likely to continue in the post-corona world. A rigorous interplay between the different scientific cultures, from political science and sociology to economics and public health will have to jointly address the related issues.

III. Hard issues in the post corona world

Research level 5: Health as a security priority

Globalization has developed over several decades as a technologically induced and largely economic process. Economic interdependencies were the driver of political efforts to enhance global diplomacy and governance. An unprecedented “summit” culture developed. Already before the corona pandemic, the inflation of political summitry raised legitimate questions about the relationship between expenditure and effect. In the absence of mechanisms for global rule enforcement, non-binding declarations of intent, recommendations and best practice advice are less noticeable when world conferences present their results. The corona pandemic has reversed the vector. The health of every single person was suddenly a matter of greatest concern. Individual fear became a collective driver like never before, all over the world and almost simultaneously. Governments around the world asked their citizens to cooperate. Some enforced sanctions and imposed limitations to freedom more rigorously than others. The underlying logic, though, was global: Human life should be saved at all costs to avoid the collapse of health systems. Such a scenario, thus was global consensus, would expose more lives to potentially deadly risks.

Corona became the sovereign, the legislator, the driver of the implementation of human crisis management. A virus drove government actions. A virus determined emergency ordinances and agendas, parliamentary resolutions and far-reaching restrictions on freedom in the everyday life of humankind. This time, the decision on a state of emergency to recall the language of Carl Schmitt did not come from the reservoir of political will and human words.¹¹

- 11 Carl Schmitt, *Political Theology*. Four chapters on the concept of sovereignty, Chicago: The University of Chicago Press, 2005 (original German edition 1922). The following sentence can be found there: “The exception is more interesting than the rule. The rule proves nothing; the exception proves everything: It confirms not only the rule but also its existence, which derives only from the exception. In the exception the power of real life breaks through the crust of a mechanism that has become torpid by repetition.” (p.15).

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Decisions were imposed by nature, which is stronger than humankind. The collective fear of incurable illness and agonizing death generated quarantine, curfews, shutdowns and emergency ordinances at a pace that was previously thought only possible, at best, under conditions of civil war or after a brutal coup d'état. The ubiquitous fear led to restrictions of freedom for most of humanity in the name of collective health hazards. The unprecedented infringement on free human action was legitimized in most places by the unconditional will to protect the lives of the infected and those not yet infected. There were variations around the world, depending on national case numbers and respective concerns about the stability of the health system. At its core, however, the corona pandemic dominated public agendas around the world. Other diseases were able to spread faster because health systems temporarily only focused on containing the corona pandemic. In far too many poor countries, especially in Africa, vaccination programs were suspended. Malaria prevention and even cancer treatments fell behind. The number of medical examinations and operations around the world that were postponed as not being immediately necessary have probably not been counted anywhere.

All over the world, instructions for washing hands replaced advertising for consumer goods. Will the unprecedented world education program in hygiene last? How can basic hygiene rules be institutionalized over time? Will the nations of the world be ready to make the establishment of resilient health systems in all nations the top priority of the next wave of world conferences? Will priorities in development cooperation be adjusted so that prevention in questions of human health, preparedness for pandemics, and the preparation of disaster control and health care come first in future world social policy? Will the countries of the world learn and accept what is required so that health crises do not lead to the collapse of states? In the middle of the corona pandemic, at least 25 countries had become insolvent.

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According to the World Bank, over the course of 2020 more than three-hundred million people were plunged into existential poverty as a result of the economic measures taken to contain the virus. Health as a security issue has rightly become a complex and pressing global theme.

Without more intensive global cooperation and a massive permanent transfer of resources, these challenges will not find the proper response. One must be afraid that political answers will be disproportionate to the rhetoric that is often used in favor of multilateral cooperation. A debt deferral for poor countries could possibly stand as a minimum global consensus at the end of long negotiations. Here, China would have a particular duty to African countries that have fallen into a new debt trap due to Chinese loans. A noticeable increase of wages of the medical and nursing staff all over the world will most likely remain a doubtful hope. In spite of the outpouring of sympathy at the peak of human suffering and fear, a sustainable material gratification for front-line health workers is unlikely to become a global reality.

The most important insight from the corona pandemic: Better prevention and smarter, timely responses to warnings of pandemics is needed. Pandemics will remain part of unfinished globalization. However, would private and public conclusions drawn from this knowledge be far-reaching enough and sustainable? Research expertise in several disciplines will be necessary to cover the complex nature of global public health questions. Medical and sociological research is required along with the services of public institutions across states, regional groupings and international organizations. It would be advisable to undertake, hand in hand, permanent worldwide monitoring of pandemic prevention, vaccine and therapy development and hygiene requirements. Public health will become a key transdisciplinary field in support of the UN agenda for sustainability.

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Research level 6: Economic consequences.

The more global health problems grow, the greater the economic and social costs. One could speak of a reverse utilitarianism generated by the corona pandemic. From a utilitarian perspective, the greatest happiness is the greatest possible number of lucky people.¹² The corona pandemic suddenly gave humankind a new definition of unhappiness: The greatest misfortune is the sum of the possible misfortunes of all. Humans can escape this spiral not through inclusion, but only through exclusion. Only those who survived the disease and recovered or those immunized by a vaccine were considered free from the unhappiness that corona may bring. Strategies to counter the un-happiness-paradigm differed. There were those who believed “herd immunity” was the natural way to go, the faster the better. Until sixty to seventy percent of a population would be "contaminated", as the drastic technical term is called, it would take a long time, despite the explosive outbreak of the corona pandemic. The other extreme favored a strategy of instant and drastic closure of all daily social and economic activities once a single case of the corona virus appeared. Over time, all possible variations between the two extremes of “doing nothing” and “closing down everything” were tested. All strategies had their strengths and their weakness, thus leaving highly fertile experience for comparative research.

In most countries, proportional measures interfering with the economy dominated. New and artificial terminology tried to ease the harsh term “curfew”. “Shutdown” and “lockdown” became the most prominent neologisms of 2020. Social distancing, contact restrictions and bans on social interactions aimed to help national health systems to better cope with the massive spread of the pandemic.

The net result did not change because of these didactics: Laws of rational economic activity were suspended by human will-power with different degrees in almost all parts of the world. The consequences of disrupted production, mobility and supply chains paralyzed the

12 See: John Stuart Mill, *Utilitarianism*, first edition 1863.

mechanism of the market, usually based on the free interaction between supply and demand. Usually, economic crises arise when demand decreases. The corona pandemic reversed cause and effect: Intentional, deliberate cuts in supply and subsequent collapses in demand affected entire economies. Logically, global economic interdependencies and supply chains were disrupted. The logic was the same all over the world: People should stop their social and economic demand to limit the rapid spread of the virus. However, the cost of daily living remained the same around the world. Therefore, the consequences of disruptive measures for daily life, personal freedom and economic interaction on national economies had to be constantly re-adjusted. The scope of negative scenarios soon ranged from losses in gross national product, jobs and prosperity between two and twenty percent per country. Already before the pandemic had spread around the world, an OECD forecast at the beginning of March 2020 estimated that global economic growth would be halved in 2020.¹³ In mid-October 2020, the International Monetary Fund forecasted a 4.4 percent drop in global economic output for 2020. Emerging countries and the poorest developing countries were hit hardest.¹⁴ African countries suffered from new and long-term debt problems. Only precise and longer-term empirical studies will show how the corona pandemic has affected countries with different levels of economic development. Empirical answers to the question of whether countries with a less rigorous shutdown suffered less severe economic losses than those countries that imposed a strict “lockdown” right at the beginning of the corona pandemic are likely to generate particular interest.

13 OECD Interim Economic Assessment. Coronavirus: The world economy at risk, 2 March 2020, online unter: <https://www.oecd.org/berlin/publikationen/Interim-Economic-Assessment-2-March-2020.pdf>.

14 International Monetary Fond. World Economic Outlook: A long and difficult ascent, October 2020, online unter: <https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020>.

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The fact that humankind, out of fear of the collapse of the health system, deliberately reduced its economic demand and substantially suspended mobility raises multiple questions about the economic rationality of crisis reactions. The immediate question referred to public rescue packages and reconstruction measures in order to tame the social effects of the deliberately self-inflicted shrinkage of the gross national product. In-depth answers require business and economic expertise. It will be of interest to see how competitive companies fared compared to those that already had competitive deficits before the outbreak of the corona pandemic. Also relevant is the question of the unique damage suffered by small and medium-sized companies, self-employed individuals of all kinds and people who have to survive under subsistence economic conditions.

A telling indicator showed how the gap between wealthy industrialized countries, threshold countries and the least developed countries grew in reaction to the corona pandemic. In 2021, the International Monetary Fund estimated that recovery measures in industrialized countries were available in the order of 21 percent of the respective gross national product. Threshold countries were able to activate recovery measures in the order of 6 percent of their respective gross national product. The least developed countries were able to activate recovery measures in the order of only three percent.¹⁵ Fiscal parameters underline the enormous inequality around the globe. In fact, unequal opportunities have even grown during the corona pandemic.

A thorough investigation of issues related to monetary policy is also essential. Ultimately, the focus should be on the economic and regulatory consequences of the diverse restrictions imposed by governments around the world. Immediately after the start of the corona pandemic, usual topics emerged, i.e. proposals for a mutualisation of European debt, proposals for debt relief for the poorest countries in the world and the particularly shaken emerging

15 Data cited by Ngozi Okonjo-Iweala, President of the World Bank, in an interview with Frankfurter Allgemeine Zeitung, February 18, 2021.

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countries. Soon, the media identified “crisis profiteers” in the world of financial and currency speculation. Economists, but also social scientists will answer conceptual and theoretical questions. The simple basic question was obvious to all the world: Who would ultimately pay for the trillion-dollar aid packages governments had to put together at lightning speed in order to slow down an even more extensive collapse of economic life? Who would protect the poorest on earth and save the most divided countries from slipping further into civil war-like tensions?

The more complex questions contained ideological baggage: What were the structural consequences of the economic impact of the corona pandemic on the overall relationship between market instruments and measures of state intervention? What consequences would follow from the inevitable currency devaluation? In which places on earth and for which people? Would permanent state interventions in market economies lead to new forms of nationalization? How would the consequences of the corona pandemic affect the relationship between state policy and the markets? Would state interventionist, or more precisely, state capitalist models of order emerge stronger from the corona pandemic than other systems? This question also needs to study the reactions to those who were arguing that state industrial policies would be more effective in inventing, patenting and producing anti-corona vaccines. In market economies, the question is imminent whether markets are able to push back temporary state interventions once the production of medical equipment and vaccines has become sufficient to cover the public need. Economic questions and the role of the respective political systems intertwined. Sober social science would be necessary to measure the arguments rationally against new ideological battle cries pointing in each possible direction of the debate.

A fundamental regulatory paradigm was confirmed worldwide: Shrinking economic power leads to every conceivable manifestation of economic shortage. Such shortage, in turn, exacerbates problems and increases tensions. This vicious circle became an enormous test

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for market economies throughout the world. However, did state interventionist and state capitalist economic models really fare better? Comparative research with a view to the implications of the corona pandemic for economic and currency policy will be in demand for a long time. Academic research should include not only the examination of immediate and long-term consequences of the economic lockdown, of no less interest will be comparative studies of the exit strategies. Around the world, governments chose very different exit strategies from slowing down demand, closing measures and shutdown. Some countries succeeded with flexibility and creativity. Other countries failed because of their overly bureaucratic nature. Success depended on flexibility, caution and resolve to avoid disproportionate collateral damage beyond the original objective of protecting the health system. For exit strategies to succeed, new parameters were necessary beyond the sheer number of infections, death or vaccine levels. It is worth asking which role anthropological perceptions of human behavior played in pursuing one or the other strategy. Exit strategies from corona shutdowns were not privileges granted by benevolent governments. Exist strategies were first and foremost about a return to natural human freedoms. In order to draw proper lessons about legitimacy and effectiveness in revising emergency rules and restrictions on freedom comparative research will be useful. The global improvement of preventive disaster control requires a consistent application of lessons learned from the manifold experiences with corona-related temporary restrictions on human freedom.

Research level 7: Political management.

In addition to socio-psychological and clinical research on fear factors, political science studies will have to reflect on the behavioral patterns of political management in different regimes around the world. Infringements on daily lives and of personal freedom, including mobility and professional activities, require a solid legitimization. Free societies guarantee personal freedom as a constitutional right that comes before the state order. Infringements are legitimate only

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because of a temporary need to protect public safety and especially a functioning health system. As soon as possible, curtailed rights must be given back to their owner. Autocratic and dictatorial regimes are considered as negligent about individual freedom and civil rights. Yet, all regimes and constitutional orders around the world were facing the same fear factor related to the corona pandemic. It would be unempirical to assume that autocratic or dictatorial regimes do not show empathy for the feelings, especially the fears, of their population. Under the state of emergency, which the corona virus forced upon mankind, the judgement of different political managements needs to address more subtle themes.

Wasn't it basic human fear, too, that drove the initial concealment of the pandemic in China? Immediately following the outbreak of corona, the Chinese political leadership lacked transparency and appears to have covered-up critical information. The subsequent aggressive shutdown of Wuhan and other cities, hand in hand with a rigorous management of exit strategies to reopen social life in China were not exercised without empathy, concern and fear. Of course, one should not be naive: The claim of the Chinese state party, to control a hegemonic narrative about the corona pandemic was an omnipresent factor in China's corona management. The immediate radical renunciation of personal freedom as the prime condition to guarantee extensive security was a model which Western countries did not approve. Yet, the Chinese model worked in China. The Chinese people are as familiar with human feelings of fear as anybody else on earth. Hence, it is not inconceivable for Chinese citizens to consider security as more important than freedom. This may even be a national attitude prior to the rigid abuse of communication powers by the state party and its government in projecting a hegemonic narrative about the evolution of the corona pandemic. To say this, does not relativize universal human rights, but contextualizes their application in real life. Also free societies in Asia such as Japan and South Korea showed a more open mind to wearing masks and accepting social distancing norms than European or American societies. Pre-political

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individualism or the lack of it is only one feature to comparative studies of political management of the corona pandemic.

Across most Western and many non-Western societies, the struggle to balance freedom and human security generated enormous variants of political management. The more the focus moved to flexibility, transparency and proportionality, the more the political management of the corona pandemic became a constant learning process. The political management of the corona pandemic generated a global culture of trial and error. In federal states, this approach has been even more complex because of additional layers of horizontal decision-making. No political system on earth was free from contradiction. The rubber truncheons used by Indian police officers already in the early stages of the pandemic showed that massive social tensions also occur in liberal federal societies. The longer the pandemic lasted, the more the patience and civic sense of citizens were stressed. European societies became additional victims of a permanent discourse culture, adding to levels of confusion or raising the level of expectation to a point that political decision-makers were hardly able to meet. The longer freedom was restricted in order to protect public health, the resistance level to corona restrictions in free societies also increased. Permanent changes and adaptations of rules of conduct in socially free societies on all continents were a common feature of the corona experience. This trial-and-error-approach of many decision-makers in corona management was considered a sign of democratic maturity and reason. Critics, on the other hand, blamed the absence of a comprehensive forward-looking strategy. Reducing the complexity of reactions to the corona pandemic to a regime contest between Western and non-Western political orders would simplify the matter enormously.

Certainly, democratic states, and even more so those with a federal structure, find it structurally more difficult to adhere to hierarchical chains and decision-making clarity with the same consistency as autocratic states. Centralized states - including those with an impeccable democratic and rule of law-based order - have found it

difficult to develop and implement local differentiations in their corona strategy. A solid review of shortcomings and an unbiased analysis of strength and weakness of the various political management strategies will be among the interesting research questions for comparative social sciences in the post-corona world. One can already hear some of the suspicions and defensive arguments that are likely to go hand in hand with this research under conditions of discursive media democracy. Most self-defeating will be those who argue that they had known everything already from the start of the corona crisis. There simply was no global textbook to guide any political management through this unique global crisis. Corona triggered a big learning curve for all those societies who genuinely wanted to learn about the strength and weaknesses of their political order.

Times of crisis are always and everywhere the hour of the executive. Any government is expected to provide leadership and clear messages in consideration of the respective current knowledge. Therefore, the behavior of political leaders will naturally receive special attention in any research on crisis management following the corona pandemic. The developments in the United States will undoubtedly stand out. However, even in the case of the US one should warn against ritualized accusations. It will be more productive to see the social and political divisions in the US in their context. Donald Trump's presidency was not a cause but rather an effect of deep societal divisions, which began long before the corona pandemic. After all, during his controversial presidency the foundation stone was laid in 2020 for the speedy vaccination process with heavy public investment (18 billion US-dollar) into the "Warp Speed" program.

Almost intuitively, the study of the political corona management will look at management patterns of different regime types. However, looking at the nature of political regimes alone is too simplistic as a basis to blame one regime type or defend another. In the course of the corona pandemic, hierarchical decision-making processes and enforcement requirements did not differ as substantially as is often claimed among different types of regimes. For the corona

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management, the nature of political regimes and governance structures was only one aspect for further research. As important, if not more important, than regime structures was the way in which three crisis management factors interacted: transparency, efficiency and a measured sense of proportion coupled with a high degree of adaptability. Of course, the idea of transparency correlates with truthfulness and truthfulness correlates with an open and pluralistic political order. Pluralistic und transparent coordination, inherent in Western democracies, usually goes beyond what is common in autocratically governed states. Discourse, dispute and slow decision-making tend to be the consequence in Western democracies. Legitimacy of political action needs approval by society, especially when the infringement of personal freedom is involved. For this reason, democratic systems resorted to repeated appeals to voluntary actions of their public and to personal responsibility. In autocratic regimes, security priorities were set quickly and seemingly with a higher degree of consistency. However, the search for measured proportionality and balance between health security and personal freedom was an issue everywhere. Modern monitoring systems common in China are strongly rejected in the West. It is almost intuitively politically incorrect in the West to embrace this approach and to objectively study the effectiveness of rigid monitoring and supervising systems. Western societies focus sometimes too excessively on data protection. Therefore, also in Germany, which usually prides itself on its organizational skills, the digital tracking of contacts has not worked well. Comparative research on the global political corona crisis management needs to be guided by sober, non-prejudicial and differentiated considerations. The first priority should always be to learn lessons for managing future global natural disasters. Throughout the corona pandemic, decision-makers in all political systems were often at the mercy of speculation about the effects of their decisions. Nobody had any previous experience in dealing with the new global sovereign, corona. Decision-makers around the world relied on the competence of medical experts. The media presence,

occasionally media dominance, of epidemiological experts was not a characteristic of Western societies alone. Autocratic and dictatorial states were also resorting to expert information in order to reassure their citizens and to manage expectations. Epidemiological, virological and intensive care experts did not always agree. Sometimes, they differed significantly in their assessments. The media insisted on exaggerating such disputes. In fact, almost all medical experts in most countries held back with judgments of political relevance. More informed sociological or anthropological, ethical and religious reflections would have helped to gain a comprehensive picture.

Expert rule has been the subject of philosophy since the days of Plato. In ancient Greece, expert rule was primarily the rule of philosophers. In antiquity, the point of reference and the goal of all reflection was concern for the common good, the *bonum commune*. In the corona crisis, the task of the experts reversed: Experts were no longer high priests of a therapy of the good life. Instead, they became snake charmers, from whom one hoped to reduce fear and anxiety. At the same time, everyone knew that even medical experts could not do magic on one crucial question: The early production of effective vaccines and the optimization of medical care. It took time for both to materialize. Eventually the gap between vaccine production, which is an overly complex process, and the growing anger over the seemingly slow process to immunize humankind confirmed a widely applied social law: The law of rising expectations. Expectations always tend to rise disproportionately in the very moment in which a negative situation is improving.

Comparative research on the political management of the corona pandemic cannot avoid the study of systemic implications. This includes the issue of legitimacy in democratic orders based on transparency and civic self-discipline, the relationships between expert knowledge, voodoo-like worship of hope and fear, and the importance of global health cooperation. Media exaggerations, owed to nervousness during the crisis, and customary prejudices should in no

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way influence the search for scientifically suitable criteria in anticipation of the management of future natural disasters. It would be helpful to compare public political approaches to crisis management with crisis management strategies in the private sector (business). Definitely, there will be no shortage in the post-corona world for strategic foresight. Learning communities will remain essential to assess and anticipate possible future natural disasters and their human consequences.

Research level 8: Power matters.

The speed at which the corona virus spread around the world in 2020 reinforced its ultimate point of reference: Globalization. The closer the global interactions of a society, the faster and more strongly the corona virus spread. It was therefore not surprising that the poorest and most isolated countries, least involved in the global context of production processes and personal mobility, were the last places for the corona virus to rage. Some Pacific island nations were even able to prevent the virus from entering their soil by simply shutting down all air transportation with the outside world. Yet, the poorer countries were the most vulnerable. At the same time, they were the least in the focus of global media attention. The poorest countries in the global south – as well as marginalized population groups in the industrial north - are likely to remain the most affected by the long-term consequences of the corona pandemic. In the past two decades, many of the least developed countries had developed realistic hopes to be the next places for a solid economic take-off. As one consequence of the corona pandemic, many of the poorest countries will unfortunately experience that they will again fall behind. The level of development of many of these countries is likely to stagnate in the post-corona world. Particularly vulnerable are those among the poorest states involved in civil wars. The low resilience of the local economy, combined with fragile health systems and little hope for political stability was multiplied among the refugees around the world. Appeals by the UN Secretary-General for a global ceasefire were truly appropriate. Yet, these appeals were immediately overshadowed by

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new reports of terrorist attacks in Mali and Afghanistan. The corona pandemic was not a peace-maker at all. Limited hope originated in the readiness of Israel to share vaccines with the Palestinians. New efforts for truce and post-conflict order in Libya and Yemen have yet to stand the test of time.

Some analysts rushed to put forward the bold thesis that the consequences of the crisis would make China the leading world power. This projection did not take into account the fact that China's stability and progress depends on the well-being of the country's global partners. China's economy, it seemed, would quickly seek to emerge strengthened from the crisis due to its demographic potential, its social capacity to cope with suffering and the unbroken will to rise. China relied on the breadth of its populous society and its will to further increase in prosperity. Loyalty to the centralized state control apparatus depended more than ever on the success of this strategy. Doubts around the world about the truthfulness of China in dealing with the outbreak of the crisis only strengthened the assertion of the Chinese state and party leadership. China offered help to other countries. Critics instantly dismissed this as yet another act of Chinese propaganda. China's worldwide loss of reputation was obvious. How much this loss of reputation would affect ongoing power struggles between the leading countries of the world requires longer-term studies.

The findings and prognoses for the United States of America were and remain ambiguous, too. The US ability for self-renewal is greater than in many other places on earth. Nonetheless, the US was hit at least as hard by the health crisis and its psychological and political consequences as it was hit by the economic downturn amidst a confused and confusing political leadership. America's strength has always been the concentration of its resources. The instability of a society that had been caught in self-doubt for years, only increased during the corona pandemic. The American middle class came under additional pressure. Extreme radical fringes in the society became visible, which sparked profound concerns about social unrest in the

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US. The political system, dysfunctional in several aspects, reached its limits in the search for conflict resolution and consensus building. America's claim to global leadership dwindled further due to the corona management of the Trump administration. Nevertheless, the incoming Biden administration benefitted in 2021 from the ground laid by the controversial predecessor who had initiated the "Warp Speed" program. Nevertheless, the post-corona world accelerated the termination of the American century, which had begun with the entry of the US into the First World War in 1917. Under President Biden, the US was rebuilding multilateral alliances without the hubris of re-creating global American hegemony.

Russia remained a special case. Cold-blooded power calculations of Russia's political leadership seemed to negate the social costs of the crisis. All that counted was the ascent to a world power status, which, in the absence of other means of projection, Russia can earn respect through fear. With the Russian victory in the Syrian civil war and more than two dozen new military treaties with African states in previous years, it seemed that Russia had little fear of corona-driven rigorous isolation of the country. The poisoning of regime critic Alexei Navalny with nerve warfare gas in August 2020 was a coincidence. Yet, it served as proof of the growing fear of targeted chemical and biological weapons in the post-corona world. European sanctions did not shake Russia's internal power vectors, regardless of the impact of the incident on Russia's international reputation. Amidst the global corona pandemic, Russia managed to return as a peace-keeping force to Nagorno-Karabakh after mediating between Armenia and Azerbaijan. Putin's vision of revising the fateful demise of the Soviet Union came a step closer.

The way the crisis was handled in the Islamic Republic of Iran was idiosyncratic in its own way, although it differed from the situation in Russia. In Iran, absurd conspiracy theories about an alleged American contamination of the corona virus drove the country together behind a leadership that could only cover up its own impotence with lies and obfuscation. A rise of the country into the ranks of the leadership team

of the world was a long way off. After the inauguration of the Biden administration in early 2021, a return of both the US and Iran to the negotiation table became possible in order to preserve the foundational parameters of the Iranian nuclear deal (Joint Comprehensive Plan of Action).

Power issues, which are likely to dominate the post-corona world, affect the basic parameters of future globalization and the global political architecture (global governance) that is lagging behind. For decades, globalization supported the assumption of mutual benefits through market expansion with simultaneous mutual acceptance of the different constitutional orders and regimes around the world. More than the United Nations, the G20 Group of States has become the symbol of this *modus vivendi* of the management of global affairs. After the global financial crisis in 2008, the G20 Group proved itself to some extent. The worldwide non-aggression pact held.

With the corona pandemic a new age has begun. Will the political will to perpetuate multilateral forms of governance prevail? It is easier to raise this question than to answer it comprehensively. More strategic research is necessary, also with regard to post-corona security issues. Future power struggles for honor, influence and resources in the post-corona world will have to reckon with the possible threat originating in the targeted use of biological weapons. The first use of the atomic bomb in 1945 in Hiroshima and Nagasaki, which was regarded as deadly for all humankind, was never repeated. The selective use of the atomic bomb in 1945 served as a global deterrent despite the subsequent proliferation of nuclear weapons technology and multiple nuclear tests. In the post-corona world, the opposite effect could happen with regard to biological weapons. The ubiquitous fear that the corona virus had triggered, without actually wiping out all of humankind, facilitates the fear that the selective use of biological weapons might become more likely in the future. A targeted use of viruses - or even just the threat of using biological weapons – has become more likely in the post-corona world. In the post-corona world, the threat perception regarding asymmetrical acts of war needs

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to sharpen the sphere of biological vulnerability. Related danger includes acts of biological terrorism. A strategic definition of threat factors has to focus more strongly on the threat of biological weapons. The only way out of this threat requires enhanced levels of resilience against possible new biological weapons and their intimidating effect.

IV. And the EU? Fragmentation, bureaucratic coordination or concentration of competencies?

The European Union will experience the consequences of the post-corona world in many ways. The health challenge will not disappear with herd immunity. Regular vaccinations might become normal for most EU citizens. On the political level, uncertainty about the implication of the corona pandemic for EU policy-making will continue. At the very beginning of the corona pandemic, fragmented European decision-making led to confusion and chaos. Initially, each country reacted alone to the crisis. Incomprehensible closures of borders in the European internal market followed. There were the usual excuses. Even language barriers were mentioned in order not to better distribute patients and protective clothing quickly across the EU. At the same time, Chinese and Russian relief supplies arrived, at least occasionally.

The main EU problem is systemic: According to the Treaty on the Functioning of the European Union (TFEU Title XIV, Article 168) public health is a matter of shared competences in the EU.

Treaty on the Functioning of the European Union (2009)

Title XIV, Article 168

“1. A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities. Union action, which shall complement national policies, shall be directed towards improving public health, preventing physical and mental illness and diseases, and obviating sources of danger

to physical and mental health. Such action shall cover the fight against the major health scourges, by promoting research into their causes, their transmission and their prevention, as well as health information and education, and monitoring, early warning of and combating serious cross-border threats to health.”¹⁶

Several developments demonstrated how insufficient shared competences are under conditions of a major natural disaster affecting public and personal health across the EU.

- The proposal of the European Commission to organize an EU-wide temporary safety net to mitigate unemployment (SURE) in April 2020 was innovative and timely. It took the European Council until September 2020 to approve SURE and define the amount of money it could use. The implementation of the SURE scheme remained slow and bureaucratic. The complex bureaucratic process that stands between the EU initiative and the people in need of receiving its financial benefits is a telling disaster.
- In June 2020, the European Commission received the mandate from the European Council to spend up to 2.7 billion Euro stored in the European “Emergency Support Instrument” (ESI) for medical measures to cope with the corona pandemic. The ESI had been created with the Treaty of Lisbon in 2009. Its cautious evolution¹⁷ was exposed to a unique stress test by the corona pandemic. The EU decided to jointly support the development of vaccine and possible therapeutic medication against corona. EU member states agreed to jointly purchase possible vaccines, benefitting from the power of a larger demand. The European Commission negotiated several

16 European Union, Treaty on the Functioning of the European Union, Title XIV, Article 168, online at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>.

17 On the cautious beginnings of EU emergency coordination during the years of Commission President Jean-Claude Juncker, see: Christos Stylianides, European Emergency Coordination, ZEI Discussion Paper C, Bonn: Zentrum für Europäische Integrationsforschung, 2020, online: <https://www.zei.uni-bonn.de/dateien/discussion-paper/DP-259-2020-Stylianides.pdf>.

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contracts amounting to 1.3 billion doses of vaccine. It remains incomprehensible why obviously nobody was aware of the complexity of vaccine production. As consequence, the start of the European vaccine rollout in December 2020 and throughout the first half of 2021 was slow and unsatisfactory. Insufficient communication strategies by the EU (and in some of its member states) triggered false expectations, accelerated by emotional media coverage on the matter in some EU member states. Frustration over extended shutdowns led to growing critique of the EU handling of the vaccine acquisition. In light of the limited competences (and limited budget) of the European Union, this hysterical critique was unfair and stereotypical. The EU had never received bigger financial leverage from member states to negotiate more vaccine purchases on time. The EU's financial means remained hostage to necessary unanimous decisions by member states.

- Efforts for strategic foresight in the EU by better coordinating public health institutions and the pharmaceutical industry compared poorly with the potential of the US agency BARDA. While BARDA is almost a paramilitary operation originating in efforts to prevent bio-terrorism, the ability of the European Commission to develop a genuine coordination capacity for a strategic foresight in matters of public health remains dependent of the limited political will of EU member states to transfer national competencies to the EU. The vision of an EU equivalent of the powerful US agency BARDA remains an illusion unless substantial revisions of health competences were to be enshrined in the Treaty on the Functioning of the European Union. Whether coordination through the mechanism of the newly invented “HERA Incubator” will lead to a coherent industrial policy aimed at strategic sovereignty in matters of public health, including a strategic storage capacity for future immunization rollouts across the EU, is doubtful.
- In the absence of consensus among EU member states on the very idea and acceptable content, the rather simple challenge to generate an EU-wide “Vaccine Certificate” became subject to bureaucratic

bickering, complex coordination efforts and unilateral national decisions in 2021. A vaccine certificate was not about privileges for the happy few who had received an early immunization. An EU-wide vaccine certificate was a logical element on the way to return to the constitutional rights and liberties enjoyed without political precondition by all EU citizens prior to the pandemic. A vaccine certificate was not only a matter to re-start economic activities, including in the service industries. A vaccine certificate would also serve as an incentive for vaccine-skeptics to accept an immunization. In 2021, the EU began to coordinate fragmented national efforts with the aim of generating a digitalized complementarity to national vaccine certificates. This approach was highly bureaucratic and multiplied efforts instead of binding them. The simple solution would have been to develop a single, unified vaccine certificate right from the beginning for all EU member states.¹⁸

- It remained difficult to track the immunization process and the fate of people recovered from the corona virus on a single and unified EU webpage. The “European Centre for Disease Prevention and Control” (ECDC), an EU agency based near Stockholm, remains a noble yet obscure entity. The ECDC “Vaccine Tracker” was a hidden gem on the internet throughout the vaccination rollout.¹⁹ Across the EU, media tended to only report about the respective national vaccine progress. This approach distorted and undervalued the overall EU fight against the corona pandemic.
- The EU was at the frontline of those realizing the need to promote global solutions to the corona pandemic. Nobody in the world is safe from infection until everyone is safe. This mantra of the World Health Organization, rightly so, guided EU contributions to

18 It was eye-opening to recall that it had taken from 1980 until 1991 to develop a European driver’s license, replacing 110 different drivers’ licenses across the EU. Only since 1996, the European driver’s license with national specifications is in use. A European Health Insurance Card is in use since 2004.

19 European Centre for Disease Prevention and Control (ECDC), Vaccine Tracker, online at: <https://qap.ecdc.europa.eu/public/extensions/COVID-19/vaccine-tracker.html#uptake-tab>.

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COVAX, the vaccine initiative of the WHO for poorer countries. The COVAX target was to acquire 1.3 billion doses of vaccines for 93 poorer countries, mostly in Africa. The shared competences in EU development cooperation reinforced the problems related to the shared competences in matters of public health. It was not easy to identify the impressive contributions of the EU divided by contributions of the European Commission, EU member states and the European Investment Bank.²⁰ Geopolitical competition added to the issue and sharpened the need for a single EU approach. In early 2021, France suggested that the EU should donate vaccines because otherwise poor countries would be inclined to buy Russian or Chinese vaccines with EU money. The reactions to this proposal across the EU were reluctant as other EU partner countries were still struggling to get enough vaccine for their own citizens.

The corona pandemic confirmed what was already visible in the so-called refugee crisis of 2015: The limits of intra-European solidarity and the limits of extra-European solidarity with the wider world are not a matter of rhetoric. Overcoming these limits requires realistic and coherent assessments, mutually accepted clarifications of competencies and crisis-proof regulatory mandates. In order to project EU “soft power” across other continents, the EU remains lamentably fragmented. As long as the mandate of the European Commission is extremely limited on matters of public health, one cannot expect more than bureaucratic means of coordination. Disappointment among EU citizens is inevitably pre-conditioned. Outside the EU, disappointment with the slow and byzantine EU performance will remain constant.

The long-term perspective to counter the existing systemic shortcomings is the development of a European Health Union. Commission President Ursula von der Leyen outlined the idea in her

20 In late February 2021, on the occasion of a digital G7-meeting, the EU aggregated the European contributions to the overall contribution of 15.9 billion Euro which had been pledged to COVAX by then: EU member states 3.1 billion Euro, European Commission 2.4 billion Euro, European Investment Bank 1.9 billion Euro, total Team Europe 6.5 billion Euro: European Union, Coronavirus Global Response, online at: https://global-response.europa.eu/pledge_en.

2020 State of the Union Address. On November 11, 2020, a “communication” was sent by the European Commission to the European Council and the European Parliament about the desirability and the parameters of a European Health Union. The very small first step of a long journey had been taken to enhance the EU’s capacity to act and its power as a robust actor in the provision of public health. It would be of the essence to revise the Treaty of Lisbon, thus granting the European Commission more emergency flexibility under conditions of a natural disaster of the magnitude of the corona pandemic.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2020)

Building a European Health Union: Reinforcing the EU’s resilience for cross-border health threats

“In her 2020 State of the Union address, the President of the Commission called on Europe to draw lessons from the current crisis and build a European Health Union. As the experience of the current pandemic is showing, gathering the EU Member States’ strengths helps overcome individual weaknesses. By working with the European Parliament and the Council towards a stronger Health Union, the EU can be equipped to prevent, prepare for and manage health crises both at the EU and global level, with all the societal and economic benefits that it would bring. A strong European Health Union will protect our way of living, our economies and societies. If public health is in danger, the economy inevitably suffers. The close relationship between saving lives and saving livelihoods has never been so apparent.”²¹

21 European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Building a European Health Union: Reinforcing the EU’s resilience for cross-border health threats, Brussels, November 11, 2020,

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In the EU's instant reaction in 2020 to the corona pandemic one success story stands out: With its proposal of a Corona Recovery Fund, the European Commission succeeded in pushing national governments to fundamentally re-assess the issue of mutually agreed debts. Following the outbreak of the corona pandemic, EU politicians discussed for several months possible options for an EU recovery concept. On May 27, 2020, Commission President Ursula von der Leyen presented a Recovery Program labeled "Next Generation EU". It should include 750 billion Euro (500 billion in grants and 250 billion in loans). The recovery program should be part of the next midterm fiscal frame (2021-2027). It should be financed with the help of new EU finances (EU emission trade for sea and air transportation, a Border Carbon Adjustment tax, a digital tax. Fierce struggles followed, underlining different interests across the EU and disputes over possible implications. In the end, the cartel of skeptics about EU bonds was cracked. In July 2020, the European Council decided for the first time that the EU could jointly borrow money on the international credit market. After ensuring the acceptance of a mechanism that links financial contributions from the Corona Recovery Fund to the standards of rule of law in member states, the European Parliament agreed, too. The Corona Recovery Fund significantly increases the EU's medium-term financial framework for the years 2021-2027. The regular EU budget for the years 2021-2027 of 1.07 trillion euro increased by additional 750 billion euros (3900 billion as grants, 360 billion as loans). At least thirty percent of the loans will support the EU's "Green Deal". Almost overnight, the euro became a major factor in the international bond market. The search for creditors will noticeably increase the global importance of the euro.

In 2017, French President Emmanuel Macron had formulated a new strategic goal for the EU: to establish European sovereignty. For the EU, this is indeed the only way forward to assert itself in a completely changed world and to protect its citizens. The fiscal decisions of 2020

online at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0724&qid=1605690513438>.

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adds a building block to the concept of European sovereignty. However, this component alone is by no means sufficient. The necessary expansion of EU's "own resources" (a misnomer in the absence of mutually accepted EU taxes) remains unfinished. In many policy areas, too, the EU was suffering from unfinished components to achieve European sovereignty.

There will only be a good future for the European Union in the post-corona world if public health matters become features of common and legally binding competences. The resolute legal upgrading of EU competences in emergency and disaster management as well as in health policies is necessary to prepare for the next pandemic. Experience has shown that a better division of sovereignty between the EU and its member states will only take place gradually and hesitantly. Yet, moving beyond "shared competences" as defined by the Treaty of Lisbon in the sphere of public health is a necessary element to advance the concept of European sovereignty in a completely changed global environment.

In the years ahead, the European Union will have to conduct a treaty reform. This has never been easy. More than ever, core state powers are affected. The corona pandemic has demonstrated that another objective is even more sensitive: core health protection of EU citizens. The Treaty of Lisbon needs a revision regarding more flexible and more unified emergency competencies of the EU under conditions of a natural disaster of the magnitude of the corona pandemic. The struggle over EU competences will never be easy. The corona pandemic has accelerated the sense of urgency: The post-corona world will require the faster development of a geopolitically relevant EU architecture, including vaccination sovereignty. The EU needs to be internally more effective in order to better project external power and skills. Europe's self-assertion needs more than the successful defeat of the corona threat. Europe's self-assertion needs relevant legally binding contributions to a European Health Union that genuinely deserves this name. Only a more powerful, more coherent and more flexible

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emergency mechanism can help to serve EU citizens and the wider agenda of global multilateralism.

It would be useful to conduct a counter-intuitive study on the costs of non-Europe during the corona pandemic. This study would have to consider the following key factors:

- How much would have been the price for the EU to immediately purchase sufficient vaccines for all EU citizens, for all citizens of its poor southern and eastern neighborhood as well as for all citizens of sub-Saharan Africa, and distribute them for free (instead of hypocritically blaming China's vaccine export)? How would these costs compare with the aggregated sum of all national and EU wide financial rescue packages to compensate the cyclical shutdowns of the European economy?
- What are the aggregated costs of the curtailment of the global economy due to the protracted nature of the corona pandemic because global immunization will take as long as it does because of the slow speed under the COVAX scheme?

The lessons learned certainly will state the following: The material and immaterial costs of non-Europe are exponentially higher than the costs of a unified, resolute and global approach of the EU. As the next natural disaster is unavoidable, the EU needs to better prepare itself for swift and robust action against a natural catastrophe of the nature of the corona pandemic. Better and more far-reaching health emergency powers will be indispensable for a geopolitical EU. EU member states have to accept the necessary shift of competences to the EU level.

V. The “unknown unknowns”: resilience of societies and fragility of human life

Globalization continues because globality does not disappear, the reflexive interpretation of the unity of the world in the midst of a diverse, fragmented

humankind.²² The mutual dependence in more and more spheres of our daily lives and social context will continue to grow. Globalization is not just a matter of summit diplomacy and financial market transactions. The importance of a globally available vaccine in the event of the outbreak of a new, globally affecting disease corresponds to the importance of functioning structures of political multilateralism. Being a fire service and a precautionary agent at the same time is not easy for any political system or any political actor. However, there is no other way to combine resilience and shaping the future worldwide. The corona pandemic has amply demonstrated: Experience in unity and global fear are mutually dependent.

When it comes to climate change, fear is limited to the world itself. Climate change is primarily about the planet itself. The possible infection with the corona virus is a personal, individualized fear. The corona threat concerns everyone everywhere. Anthropological, psychological and theological research will have to begin with this existential experience to make an insecure human race understand retrospectively why the corona virus became the sovereign who defined the state of emergency of the whole world in 2020/2021.

In times of normality, public statements are predictable because they refer to “known knowns” and at best to “unknown knowns”. Intuitive reactions that tie in with previous positions, arguments and perspectives belong to the category of what is familiar to us. Those statements interpret what are the “known known”. Carefully orchestrated assumptions based on previous experience and cautious forecasts belong to the category of what is unfamiliar yet imaginable. They represent the “unknown knowns”. The corona pandemic as a world event represents a third dimension of how the human mind is dealing with the speculative: “the unknown unknowns”. “Unknown unknowns” are those phenomena or thoughts that occur without precedence or induction from earlier experience. The research agenda of

22 See: Ludger Kühnhardt/Tilman Mayer (eds.), *The Bonn Handbook of Globality*, Cham: Springer International, 2019.

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the post-corona world could hardly have found a better example as a point of departure for new experimental questions on human understanding.²³

At the beginning of the corona pandemic, the German daily newspaper “Welt” quoted a virologist stating that the corona pandemic had triggered “an experiment with the entire world population” for which the world population was not prepared.²⁴ In the past, virologists had repeatedly warned of global epidemics. Like most unpleasant predictions, these warnings went unheard. In this sense, the corona pandemic was no “unknown unknown”, no “black swan” that is spoken of when unexpected events occur. The corona pandemic was not unthinkable before it happened. However, appropriate preparations to cope with the “unknown unknown” of a worldwide pandemic had not taken place anywhere in the world. All of a sudden, the corona shock hit and it hit the world population at the same time. Predictions about the good end of the bad experiment were soaked up like nectar. Pandemics usually end when sixty to seventy percent of the population are “infected”. Historically, a period of three to five years is necessary for a pandemic to disappear. The outcome of the corona pandemic will not happen as one world event. The outcome of the corona experiment will differ locally. There will be victims and losers, survivors and winners. There will be future outbreaks of limited “hot spots” beyond all hope for a global immunization. To enhance the resilience of all societies around the world will remain a constant challenge.

Some world-changing certainties outlived the daily corona hype. The 2020 Olympic Games, the games of the world's youth, were postponed to 2021. Other certainties survived the corona pandemic. The most important one in

23 Inspiring reading provides Ivan Krastev, *Is It Tomorrow Yet? Paradoxes of the Pandemic*, London: Allen Lane, 2020.

24 Coronavirus Pandemie: „Ein Experiment mit der gesamten Weltbevölkerung. Alles ist möglich“, in: *Die Welt*, 27.March 2020, online as:

<https://www.welt.de/vermishtes/article206833027/Coronavirus-Pandemie-Ein-Experiment-mit-der-gesamten-Weltbevoelkerung-Alles-ist-moeglich.html>.

On the day, this article was published, 652.092 cases of covid-19 were confirmed worldwide. 137.591 patients had recovered and 30.313 had died. Only a year later, the figures had multiplied. A year later, on 27. March 2021, the figures had multiplied exponentially: 126.153.250 cases of covid-19 were confirmed worldwide. 71.483.476 patients had recovered and 2.768.409 had died.

spite of all figures about corona victims: The world population grew by 2.5 percent in 2020. World population growth will continue, open-ended. It is certain that many young people in the lower and middle levels of the earth's pyramid of prosperity want to continue climbing. They strive to improve their life chances. By no means will they be satisfied with a world of renunciation suggested by some leaders in affluent societies as an appropriate response to the post-corona challenges.

New opportunities, but also new conflicts, if not disasters, are inevitable in the post-corona world. Obviously, the world population of all generations will have to reinvent itself as a learning community in order to cope with the paradoxes of unfinished globalization. Humankind has created this unfinished globalization with all its contradictions and imperfections. The research agenda for the post-corona world is likely to be much longer and more complex than formulated in these few thoughts. Scientific research is more than ever necessary as transdisciplinary cooperation in a “dynamic multi-level system.”²⁵ Whether or not this approach will contribute to a better world, will only be determined later. One fact is certain: Fragility of human life will remain a constant factor for the global population and for each individual. The corona pandemic has opened the door for the beginning of the post-corona world. Now, the global age has truly begun.²⁶ It is a global age, in which humankind will have to live with the corona virus and other unpleasant realities, challenging the resilience of all societies and reminding us of the fragility of human life.

25 See: Michael Gehler, *Zeitgeschichte im dynamischen Mehrebenensystem. Zwischen Regionalisierung, Nationalstaat, Europäisierung, internationaler Arena und Globalisierung*, op.cit.

26 For early assessments of the global age see: Martin Albrow, *The Global Age: State and Society Beyond Modernity*. Cambridge: Polity Press, 1996; Jayshree Pandya, *The Global Age*, Cham: Springer, 2012.

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