Most of us have by now for more than a month experienced a severe “change of daily life,” a lock down, and have been in an eerie surreal situation – “unthinkable” still some months ago. By now it feels, that one nearly has begun to develop a kind of a new daily routine under Covid-19 [(an infectious disease, caused by severe acute respiratory syndrome Coronavirus 2 , SARS-CoV-2)] with the hope to see some light somewhere towards the end, but also a certain disquiet about that eventual ‘new, different normal.’ Then – most likely – the Coronavirus will not be any longer the central concern, but its secondary effects will be. Still, every day continues to bear some other unforeseen, on the local, national, and global level – the unexpected and surprising will continue to be more the norm than the exception, for quite some time still, stressing our patience, resolve, resources, and discipline. As always, there is neither a simple answer nor a linear prediction – rather it has become clear that only with determination, cooperation and solidarity will we master this pandemic and its various effects on our community, nation, and indeed the world.

The following paragraphs offer observations, perspectives, and projections on “snippets” of the current situation: a general picture, crisis phases, numbers in some comparison; the medical dimension – tests and treatments; and socio-political observations – from our community to Vienna, Austria. The paper ends with some recommendations for a careful softening of a shut down. Concluding and summarizing observations will open that commentary. This is Memo II in a series on change caused by the Covid-19 Pandemic. Much might be known already or might have changed since it was written; we invite your reactions and considerations – please do stay happy & well!

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1 Wolfgang Danspeckgruber, Founding Director of LISD at Princeton University extends his gratitude particularly to Rana Ibrahim for invaluable assistance; he thanks Jenny Buck, Bradin T. Cormack, Robert Finn, Joschka Fischer, Walter Hinderer, Werner Mörch, Tomas Ries, Hans Ulrich Seidt, for helpful comments; Annegret Dettwiler Danspeckgruber is Principal Investigator at the Princeton Neuroscience Institute.
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CONCLUDING OBSERVATIONS

With all the information we constantly receive – from Coronavirus infection to mortality, to the various medical treatments and the developments of vaccines, to the multitude of hair-raising consequences of the pandemic, from social, to economic and financial problems – it has become already clear that this is an event of historic and global proportions; a Change! Despite early warnings – since December 2019 - the coronavirus SARS2- COVID 19 has become a textbook exogenous shock for our national and international system – from the USA, to EU Europe, to the world, paralyzing the UN – within states and between them. From the very global down to the smallest unit: the family. The repercussions are beyond description or grasp as of yet, and for much we find ourselves still at the beginning. Remember an important truism: scio nihil scire – I know that I don’t know – that I don’t have an answer, yet.

It will take its good time until working medical treatment and immunization to effectively attack and neutralize the Coronavirus Covid-19 – which twists, and turns, and evades in a malign, weapon-like manner, surfacing and attacking in ever new pathologic dimensions; the role of infection carrying animals will have to be addressed as well. It will take much longer still to adapt our wounded system and assuage the real fallout of the pandemic’s impact. Besides its primary health and social consequences, there are enormous secondary and tertiary effects – from socio-political to economic, to wider scale and longer-term ramifications like for employment, trade, transport, infrastructure, technology, energy, and geopolitics. It will require incisive adjustments to address the important remnants: from adaptation of inter-humanitarian relations and customs to the rapid introduction of very advanced technologies (– up to industrialization 4.0) – much will be here to stay; “The 22nd century has cometh upon us.”

Today we face a challenging dichotomy: On the one hand, for many and much it is ‘back to basics,’ back to the essential - to one’s health, family, home, and neighborhood. On the other, it means adapting and quickly accepting some of the most advanced technologies available – from cyber communications to virtual conferencing, -education, -business, and even virtual-medical and -psychological services, to rapidly introduced robotics, and increasing the use of AI.

In inter-humanitarian relations, the abrupt absence of direct eye-to-eye personal contact and a hasty halt to close physical inter-human-interaction, has imposed a sudden challenge on many of us – within and between all generations. While being sequestered with loved ones and family one has to work and interact with colleagues, bosses, business contacts and friends merely on cyber, virtually - without direct human chemistry. The longer that lasts, while being continuously confronted with ever more perplexing news - both positive and negative - the more mounts one’s restlessness and intent to tackle the mental and emotional confines of quarantine and isolation: just wanting to get out and back. – “Enough already,” I hear increasingly and ever louder – However: don’t rush! Eile mit Weile – let us take our good time ...

With mounting ‘cabin fever’ and already imagining a ‘proverbial ‘light’ at the aspired “end” arises the urge to move on, back, and out! Most importantly to diminish the economic and financial fall out. Yet, this confronts us with the eminently critical choice: a possible trade-off between growth and health! [Except:] reopening the economy too soon [would] achieve[s]
neither;” plus contribute only to “sharply enhance the chances of a second wave of the Coronavirus” epidemic.

But, let us introduce here a hopeful development: the longer the pandemic takes, the more one obtains through cooperation accumulated experiences, the better one becomes equipped in knowledge and experience of men, quality and appropriateness of materials and strategy against a high agile, aggressive virus. One benefits from “learning by doing” through accumulation of experience and adaptation. But attrition also enhances the importance of human reserves, resolve, and discipline, plus the possibility to replenish materiel and improve tools and treatment strategy.

A carefully considered reduction of the lock down – with continued rigorous sanitary rules – should really be undertaken merely, once the known infection rate is down to 1 or below (meaning: 1 infected person does not infect more than 1 other person) and has been there for at least 14 days. Intense testing is key in order to have a relative realistic picture of level of infection and also the preparedness of the medical care. This has to continue until an effective vaccine combined with an appropriate treatment has been developed, which means that we will have to deal with the issue for 12 months at the very least.

One word about ‘information and all the “news”.’ It is important to remember “In war, truth is the first casualty” – information has to be evaluated critically, since typically in any major crisis, there is too much attraction and temptation inviting distortions and manipulations for whatever purposes and interests, politically, strategically – and personally. This does however not necessarily contribute to a clearer picture of reality nor to facilitate a more effective treatment strategy – on the contrary: it may contribute to damaging confusion.

Another matter of concern are the enhanced security risks we all volunteer into as we become translucent – volunteering each and everything, including our most private and personal information in word, letter and image on the web – where it will remain; hence become an ideal source for data mining, especially with malign and/or criminal intent. Never before could anyone know so much about anybody at any time! We have to be more careful and develop anticipatory and defensive strategies!

The novel coronavirus and its targeting of the elderly has tapped into our collective family values, our care for our neighborhoods and our concern for the eldest among us weather in households or special homes. As people focus on family and community there is also a reinvigoration of home cooking, personal farming, home grown vegetables – gardening, wherever possible, even family activities from games to music, etc. A mild baby boom will surely be in store as well, come December 2020. There seems to be a general slowing down of the naturally fast pace of our postindustrial society, appreciated by many. Even nature and our environment seems to take a breath, air is cleaner, noise is less, smog is gone as seems water pollution ...

A meaningful response to the Covid-19 challenge before the introduction of effective treatment might well be also a Social Compromise: those 65 and older (“oldies stay home”) and the health impaired might have to be the last ones which can enter back into “regular daily routine”.

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2 Edward Luce, “Trump cannot force American consumers to swallow their fears,” Financial Times, 24 April 2020, p. 3
Surely there will be penetrating questions in America’s society: what happens to the unregistered, undocumented, silent large group of potentially infected?

But the new normal might not be where we left off - certainly not in the next 12 months. We will head back to some basics, and to a different new normal, questioning aspects of globalization versus dependence on the professional, community, and national level. Supposed unconstrained access regarding supply and market has been proven illusionary, demonstrating vulnerability. Will the search for insourcing and enhanced autarky cause a wider swing back of the pendulum against globalization?

The next months will be dominated by varying attempts in our communities to move onward and forward, to trump fear and failure with hope and success. There will not, nor should there be a quick end to lock downs or curbs – as one should not “gamble away” the advantage of timely action” in the words of Angela Merkel. But while the coronavirus has pointed out the major and glaring flaws of much in our overheated materialistic society and overextended reliance on an imperfect globalized economy and globalized order damaging to humans and the environment – it may at the end come to the query how can we adapt, what do we retain, and learn for the design of a post-Covid-19 world – from communal to global relations, to the environment?

Remember: it is not what the coronavirus does to us, but what we make out of its trials and our success.

3 “Merkel warns on quick end to curbs,” Financial Times, 24 April 2020, p.2
QUICK READ

(please click on the phrase to be connected with appropriate part in the text)

The Corona-crisis brings out the good, the compassionate in our communities, bringing to the fore hidden gems and individual greatness – but also lays ruthlessly bare the deficiencies and problems in community and state – from the social services to health to ethnic-demographic to socio-economic issues; separation within and communities and nations economically and in terms of education;

Due to physical distancing nearly all social interaction – from private to public has been transferred onto the virtual world, with widespread and unimpeded uploading of some of even the most intimate personal details, particularly by our younger ones – making us completely translucent and vulnerable. This all is a great find for malicious data mining.

For the millennials this is the first major national crisis which they experience personally and with hitherto unimaginable infringements on their personal freedoms, lifestyle, food, and sports – and lasting effects personally and professionally.

Recent studies on numbers of infection at the University of Göttingen and Stanford University argue that one can assume that much more than 10 million people are infected today, according to Göttingen’s calculations worldwide only 9 % of Covid-19 infected might have been captured by March 30 – whereas Stanford sees “50 to 80 times more people infected.” This could mean that the virus is much more contagious than assumed, but perhaps also much less deadly.

Fatality figures of Covid-19 pandemic do not indicate to “what extent the virus caused the death – or was a contributing factor or was simply present” when the patient might have actually died of separate, significant health condition; and might be manipulated and instrumentalized for political and other purposes. Furthermore, numbers tend to be manipulated: “in [a crisis], truth is the first casualty.”

Secondary effects of the Coronavirus will clearly contribute to social, political, and generational tensions within the American society – as the virus seems to have hit disproportionately economically disadvantaged, black and other ethnic minorities, with health preconditions, and will make the ‘uninsured, underinsured, undocumented’ particularly vulnerable.

Advanced technologies like robots, artificial intelligence, and virtual communication are forcefully entered into our daily life because of social/physical separation and for safety. Also, many companies are forced to replace humans by robots & ai – “The 22nd century has cometh upon us – now”.

Back to basics and the essential – the coronavirus threat bring to fore human values and sheds light on important issues like social structure, viability; interdependence versus (vulnerability) dependence; (negative/exclusionary) self-determination versus solidarity & universality.
General Observations

Success is not final; failure is not fatal:
it is the courage to continue that counts.
- Winston Churchill

PHYSICAL DISTANCE VERSUS SOCIAL CLOSENESS

Today’s curtailing of basically all of everybody’s personal mobility and movement has been introduced in most states of the Atlantic Alliance and beyond. That strict “social distancing” combined with strict hygienic standards is actually more like a physical distancing of at least 1.5 m/5 feet, and no touching, etc., while personal, social contacts indeed are encouraged to be maintained, for mental sanity, especially in these trying and surreal times.

Three out of four Americans (and the major of Europeans, and in OECD states) are now confined to their homes with family and/or friends, without being able to live what we thought hitherto “our normal” life and routine in an intensely buzzing globalized economy. All of us have been forced by Covid-19, or “invisible enemy” into our homes, together with children and loved ones, since weeks, and apparently quite longer still – which is increasingly challenging. Furthermore, if one ventures out these days for shopping, or what else is permitted, today some 50% of all Americans wear some kind of face mask and in some European and Asian states like Austria, France, Germany, Switzerland, South Korea this has become nearly obligatory and is followed by 90% of the electorate.

All that while one is continuously bombarded with negative news and many times mixed political messages: from a continued deterioration or only slow arriving flattening in the medical situation, to near limit of capacity in epicenters like in our Tristate Area and in other major metropolitan centers in the USA. These metropolitan areas typically house populations the equivalent of medium size European countries1, with apparently devastating effects on some communities, depending on demographic ethnic composition, their living and socio-economic situation, the situation of the local health care, and possible co-morbidity predispositions in patients and their lifestyle.

The sudden reduction or even complete stop of much of global trade, the halt of nearly all commercial and industrial activities from service to manufacturing, to construction including high rise,2 in firms of all scales and proveniences – from family, to small and medium size enterprises up to large multinational industrial conglomerates, state or privately owned; the screeching halt of national and international travel, tourism, and of most transport – from a taxi to trucking to train, to airlines (some airlines actually report up to 95% of their planes being grounded), hence

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1 Some 36,326 mio Inhabitants living in our TriStateArea: NY 20 mio (NY City 8.5 mio living in very crowded circumstances); NJ, 8.9 mio, CT 3.56 mio – which is the equivalent of some 5 Central European Countries: Switzerland 8.5 mio; Austria 8.8 mio; Slovakia 5.45 mio; Hungary 9.7 mio; plus add Liechtenstein with 0.038 mio. = 24.788 mio.

2 It is perhaps less known that “the value of global real estate is more than all the world’s stock and bonds combined.” … “Construction in all areas of real estate in the USA, accounted for 18.1% of GDP in 2019.” Rana Foroohar, “WeWork’s lessons for US real estate,” Financial Times, 13 April 2020, p. 17
a freeze of supply chains and market access – all that has led to a skyrocketing jobless surge and dramatic recessionary pressures – which the IMF has compared to the 1930s.6

The rapid expansion of Covid-19 infections in public safety, law-and-order departments such as police and fire departments, and of course correction facilities is one of those important and least considered consequences of the pandemic that can have horrendous effects in case of emergency of health, life, or property.

Not to speak about the temptation for those who might be in a position to instrumentalize that public health crisis to their benefit and sometimes even manipulate facts: political leaders, opinion makers, or even entrepreneurs for other ulterior motives - in particular those leaders who have been elected or face elections soon. Also, a leader with autocratic tendencies will be lured to use that pandemic and popular anxiety just to press ahead, to widen strong arm tactics and to silence dissent and opposition even further.

All that has contributed not only to skyrocketing unemployment numbers, and severe recessionary pressures – some even speak about a “depression”, but to an increasing uneasiness, if not deepening anxiety and uncertainty for many – anguish to some and an anticipation of the worse yet to come – in short, “perception forms reality”.

I tend to calm and contradict with “courage” don’t give up hope – “all will be well” to paraphrase W. Churchill. “A man lives not only his personal life, as an individual, but also, consciously or unconsciously, the life of his epoch and his contemporaries,” as suggested Thomas Mann in The Magic Mountain, and maintain “Courage and Hope” as was Pope Francis’ Easter Message 2020.

The continuation of the pandemic enters now its post-apex phases in many states and regions of the world, but some remain still on the ascent with high costs to men and materiel – very uneven however, and the unexpected and surprising will remain to be more norm than exception. As always, there is neither a simple answer nor a linear prediction – neither positive nor negative. Rather, progress, acceleration or deceleration, development in spurts and jolts will be the norm – while surprises abound.

Nevertheless, over time, even the worst thunderstorm with catastrophic damages recedes and the sun begins to shine again. At the end it beholds on us how to deal with the pandemic and its aftermath. Even if the general perception is rather bleak still, and many a friend remains wondering when one and how one can “get back to normalcy” – and more importantly still: kind of normalcy will that be? What “new, different normal?“

Already now, and the longer the Covid-19 pandemic lasts, the greater the pressures for those who govern to consider endeavoring onto steps to prepare for the opening of the lock down, for the relaunch of the economy while maintaining continued public health and distancing restrictions! Not only concretely – like physical distancing, but also in the perception of the people, the electorate: one can move forward, but with caution and discipline. While this should contribute to more positive mood and perspective, it also implies warning about the dangers of carelessness, a costly heightening of numbers of severe cases, due re-increase in infections.
HOPE

Many variables affect the probability of infection and contamination, the quota of infection. But even then, the personal state of a person’s immune system, age, and overall health conditions make a decisive difference whether one actually develops any symptoms and the severity of the course of the disease.

The good news is that some of the key target countries of COVID-19 like Italy and Spain seem to have entered the post-peak phase of their crisis, and even in the Eastern United States one can see a post-peak period soon. Austria, Denmark, and Spain begin with ginger steps to slowly soften the lock down and sustainably remobilize the economy, albeit with continuing stringent social/physical restrictions. Personal Quarantine⁷ and physical distancing/social distancing over a longer period of days combined with a strict protocol of hygiene, and emphasis on a strong immune system is certainly ideal to remain virus free or at least to reduce the virus load.

Encouraging news are the many positive operations on community level. From amazing community initiatives and an apparent real effort by any and all to deal with this surreal challenge in a friendly and compassionate manner. It was truly heartwarming to witness the amazing outpour, even outright joy and hopeful admiration from so many in and around New York and elsewhere, when the United States Navy Hospital Ship U.S.N.S. Comfort entered the River and eventually docked at the Manhattan Pier. A special event widely reported internationally, as was also the creation of a field hospital in a place as symbolic and internationally revered as New York’s Central Park in Manhattan. The “hope” created by that image of USNS Comfort, like a big white benevolent whale slowly entering the New York River even made the stock market rise on that Monday. Now, the Comfort has also begun to admit patients from New Jersey, in order to assist the larger community in the fight against coronavirus Covid-19. Patients were effectively transferred across state lines and aboard the Hospital ship.⁸

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⁷ For anyone interested:
The Term “quarantine” comes from the period of the black death, bacterium yersinia pestis “Pest”, ca 1338 till 1370 eventually killing some 50% of the entire European population and changing Europe socially, politically, economically, and scientifically. During the black death, bacterium yersinia pestis, Quarantine was ordered for ships: meaning to isolate a ship’s crew for 40 days, “une quarantaine de jours” (some 40 days). This became apparently first the rule of Venician ports in ca 1348. In order to reduce the danger of contamination from ships who came from regions with suspicion of carrying the black fever. It was then thought to be an effective rule: after ships entered ports they had to remain closed in the harbor without permitting the crew to go on land and to leave the ship, in order not to spray the virus and contaminate others on land or on other ships. While that seemed to be a smart rule, it however could not hinder further distribution of the virus and bacteria, because unbeknownst then, bacteria of the black death apparently where also with the flees and the rats of the ship – being presumably infected – and crawled on land via the thick ropes which held the ships to the harbor wall and then running into port and town.... eventually finding humans - there with spraying the infection...

Background: The black death, bacterium yersinia pestis came west along the Silk Road. Cafa on the Crimean Peninsula in the Black Sea – being occupied by troops from the East eventually became the epicenter for the black death which then traveled via ships during the Bosporus to first Genoa and Marseille and then Venice. 1346 The armies of the Golden Horde tried to recapture the Crimean Peninsula from the Genovese/Genueser and hence encircled & besieged Cafa; but their troops had many sick by the black death already and apparently in order to bring down Cafa by ruining the population, the troops of the Golden Horde threw bodies of dead stricken sick via their catapults into Cafa therewith bringing the bacteria into the besieged town. But apparently a prime transfer happened by flees carrying the bacteria on the rats carried the bacteria via flees, and the rats accompanied traders and goods on the silk road.

THE CRISIS PHASES

Any major event has various phases – a warning, the beginning, a middle; then higher intensity acute phase with an apex, followed by a declining and deceleration phase – possible with intermittent increase/relapse again, and eventually the back to “relative’ or ‘new normal’. Defined perhaps by the congruence between getting the infection rate down, the capability to deal with all kinds of new patients up – appropriately be it on the local, state, and national health care systems with infra structure, hospital/ICU space, personnel, materiel, etc. and the availability of vaccines as well as appropriate treatment tactic and overall strategy.

As in any crisis, once it is reaching the seriously acute phase or the apex (as in the case of conflict turning kinetic) with casualties and considerable damages, the safeguard of critical humans and material and the appropriate strategy is elemental. The factor time is essential: attrition crises hold the highest costs. But also, the longer a crisis/conflict lasts, the more one can obtain accumulated experiences, the better one becomes equipped in knowledge and experience of men, quality and appropriateness of materials, and adapted strategy.9 Being prepared for and anticipating any, such a crisis is of course the best. But the longer it lasts, the more it is protracted, the higher the attrition and fatigue of man and material, the greater the propensity of failure, reduction of motivation, and loss of discipline … So, while one may benefit from “learning by doing” through accumulation of experience and adaptation, the longer it lasts the more important become human reserves, resolve, discipline and the possibility to replenish qualified experts, material and add improved tools.

Decisive is the will, the motivation to win the fight - against this Covid-19 virus – with the best scientific expertise, experience, the right tools, appropriate tactics and a unified strategy – but without politics or cronyism, greed, financial interest, profiteering, or any other unhelpfully derogative ulterior motives.

The fight against the continuing spread of the Coronavirus, including a possible second wave will be decided by learning and adapting from the experiences now, preparedness, preservation, and creation of appropriate resources - proven or new. This process might be drawn out and grueling, potentially exhaustive and costly, to humans, materiel, and economics. It has to be dealt with also in conjunction with experiences by others, and the best instruments available.

Enhanced cooperation, sharing of information, resources, and experiences in tactics/treatments within and between states, as well as developing in international cooperation new medications, treatments (even with trial and error) to fight the virus, would be the way to go! Would also help to reduce costs – human and material – and assist to prepare for related future challenges like mutation of the virus or a second wave. Once “the infection rate comes down to 1 or below (meaning: 1 infected person does not infect more than 1 other person) and remains at that level

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9 In a crisis of longer duration, a protracted conflict, like in a war of attrition, the war will typically be won by the side which can better handle fatigue and exhaustion, which disposes of greater resources – human, financial, material (better technologies/arms), and also better strategy – baring a third-party intervention. It is said that, typically Generals and military leaders feel at the end of a war that if they would have had at the beginning such weapons as they can deploy now, at the end of the war, the war would have never begun or would have been won much faster.
or lower for at least 14 days, one gets back to containment with the focus on identifying and isolating infected individuals”\(^{10}\). Once a proven vaccine has been developed and the local hospitals and health services can manage the patients, the crisis will become under control; to address the other societal deficiencies, including the secondary effects will however require other painful adjustments ...

Symbolic Graphs

The first phases

[Graph showing possibly infected, costs, resources, medical supplies needed, dead, confirmed cases, lock down, and timeline]
At the very onset is a (W) warning phase, then an introductory and/or incubation phase, that leads into the beginning phase (B), after that comes the middle (M) phase, with actual first serious effects and acute developments then leading to the azimuth, apex (A) phase, with events and effects and consequences eventually spiking: casualties, damages, death, sheer numbers and intensity, maximum strain on resources to defend and safeguard.

Depending on whether this phase is relatively short or not will affect whether it is as a whole a relatively short and/or intense crisis with a rapid ascent, clear apex and height of the cases and related fatalities, and then relatively steep descent and return to normalcy – or whether this is becoming a long drawn out and more grueling – attrition – crisis to man and materiel with continued high or elevated levels of infectious rate and consequently continuous higher level of related death, with much greater accumulation.

Following the apex, in the receding, deceleration phase (D) on the descending side, not linear, but – besides continuously some peaks , having a long duration, d2 deceleration or thirdly, whether it is somewhat a combination of both until there is effective medical response both to treat acute cases and to deal with the population in anticipation and by vaccination, so as to enhance the personal immunity reduce the infection rate of new cases below 1; and eventually sinking back to “a relative or new normal.” (N) Relatively normal would be tantamount to the local and national health services to be able to deal with the acute cases appropriately in sufficient numbers of ICU, and without being overextended – ideally with the successful introduction of a vaccine.

Parallel and identical to the experiences in all regions and countries that have been attacked by the Covid-19 Virus is that while this pandemic demonstrates unsung instances of good deeds and personal heroism and compassion, it also uncovers and lays brutally bare the shortcomings of a
society: from deficiencies in the health service and its preparedness, to administrative planning and policies or lack thereof, to absence of stockpiles, the quality of hospitals, as well as of Care Homes for the elderly, to problems with quantity and quality of well-trained medical personnel, etc.; Also the general health and socio-economic situation of patients, the density, architecture and sanitary conditions of their habitat, the sanitary conditions at the work-environment, at sport facilities, etc. – whether in crowded metropolitan areas, or the crowded conditions in (mass) transport on land, sea, and in the air, their hubs, even on cruise ships; to potential health challenges from sports, or popular and social customs and manners.

THE NUMBERS

“In war, truth is the first casualty” quote by Aeschylus

The numbers of ‘confirmed’ infections and fatalities depend on many criteria: the level of testing, its range and quality, the appropriate reporting of the results, and also the criteria of counting fatalities, their characterization – with or outside the Covid-19 Pandemic. Clearly, different states and organizations count differently, and there have been increasing discrepancies even between numbers concerning the same state but provided by different organizations, particularly concerning dead – see for instance differences in daily mortality rates in Germany between the RKI and Johns Hopkins’ numbers. Obviously, different actors and organizations have not necessarily the same information about, or criteria, nor a converging interest in the level of numbers: for some, lower numbers would be more beneficial, while for others playing with higher ones, could be advantageous. As in all serious conflicts and crises, the “numbers game” invites to distortions and manipulations for whatever purposes and interests – it does however not contribute to clearer picture of reality nor to a more effective treatment strategy.

For a relatively objective and global enumeration see Reuters maps and charts and tracking the Coronavirus daily for general information.

At the time of this writing, we are approaching 3 million confirmed Covid-19 cases and some 210,000 confirmed dead (less than 0.8% fatality rate) in a world with more than 7.8 billion population. Looking over the numbers as they develop in the United States and in Europe, however, there are considerable discrepancies concerning fatalities coming out of the various stricken states.

China, with 1.38 billion inhabitants has by now reported only 82,800 cases and some 4,630 fatalities. USA with 330 million (3rd most inhabited country of the globe, but only 25% of China’s population) is approaching 1 million confirmed cases and more than 55,000 fatalities. While European Union’s population of 510 million (UK included) has suffered so far, some 100,000 reported dead – nearly 1/2 of them in Italy and Spain, followed by France and the U.K. Spain with

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11 Aeschylus, Greek tragic dramatist (525 BC - 456 BC)
12 The debate about possible dead between 100-250,000 at the onset of the Coronavirus crisis (much doubted by experts) was a textbook example of manipulation of numbers – the higher the better / if there will be lower mortality the announcer will be the winner, if it is equal or higher, then: ‘I told you so’ – playing it politically fail safe….
13 https://www.google.com/search?q=reu ters&sourceid=chrome&ie=UTF-8
46 million and nearly 220,000 confirmed cases has over 22,500 dead, and among 60 million inhabitants in Italy, have been nearly 220,000 cases with more than 26,000 dead – Germany with 83 million has now nearly 158,000 confirmed cases with 5,900 people dead; and amongst 9 million Austrians there are now ca 15,200 confirmed Covid-19 cases with intense and testing and ca 540 fatalities.

Liechtenstein has 38,000 inhabitants and some 82 declared cases; 1 dead. All with quite stringent physical/social distancing and lock down, certainly for the elderly above 65, and all stores closed, except grocery stores and pharmacies. While there has been a maximum wide raging testing policy the moment anybody would show even little symptoms, then also the family and contacts would be tested.

Switzerland has a similar outstanding medical infrastructure and nationally ingrained civil defense system, with excellent supplies and reserves. But the Helvetic Confederation with its population of 8.6 million in 26 cantons this time suffers relatively high number confirmed cases of 26,000 Covid-19 with 1,610 fatalities, particularly in the cantons bordering France and Italy, but also treats patients from these neighboring states.

In comparing all that to Sweden, whose 10 million inhabitants living in a territory nearly as big as Germany, Sweden seems to count on crowd immunization hence the government had originally introduced only very limited social restrictions. Only those over 70 years of age are confined to their home, while the younger and healthy should be able to live their life as normal as possible. The cases had risen considerably to some 18,640 confirmed cases by 2,190 fatalities and internal critique on the relatively lax governmental policy. The official understanding was that this risk-strategy might work in such a large country as Sweden with a low population density, few metropolitan centers. This method might also be able to support the local business and keep the economy running. During the Cold War till 1990, Sweden had one of the world’s best protected social, medical and civil defense system because of its geostrategic proximity to the Soviet Union. While this was basically dismantled at the end of the Cold War 1990, also as part of the famous “Peace Dividend.”

Sweden employs a different path as it “used simulations which anticipated a more limited impact of the virus in relation to population size than those made by other scientists, including those behind a major report by Imperial College, London.”

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14 Slogan popularized by G.H.W. Bush and PM Margaret Thatcher and referring to “guns versus butter”. Sweden begun to slowly re-activate its civil defense infrastructure again after 2014 and the Russian annexation of the Crimea Peninsula and the continued war in eastern Ukraine. While this was basically dismantled at the end of the Cold War 1990, also as part of the famous “Peace Dividend,

“In addition, the Swedish Public Health Agency pushed the idea early on that a large proportion of cases were likely to be mild. But it denied its strategy was based on the overall goal of herd immunity. A core aim was to introduce less stringent social distancing measures that could be maintained over a long period time. Schools for under-16s have remained open to enable parents to keep working in key areas.”\(^\text{16}\)
The Nordic Experiment seems to work, as Finland with 5.54 million in habitants has only 4,570 confirmed cases and 190 Coronavirus related dead. 5.80 million Danes have 8,570 with 422 dead, Norway had some 7,511 cases and to experience 201 fatalities.

This shows that 90% of dead were 70 years or older, 50% were 85 or older, 80% had high blood pressure, 49% cardiovascular disease and 29% diabetes. -Bjørn Lomborg

Depending with whom one talks, whether in our Tri-State region here in America, or with someone on another continent, in Europe or in Asia: it is clear that each national situation of the Covid-19 crisis is very different (even if reported honestly), depending on the overall situation of the country and the timing of first actions. While China, the USA, Italy, Spain, have become the epicenters over time with the virus moving from East to West, with relatively higher mortality in high population density, while the Nordic states (Dk, N, S, SF) and Austria, Germany, Singapore, Switzerland, and South Korea have had comparatively low mortality.

THE MEDICAL DIMENSION

As has become evident the degree of severity of Covid-19 depends on age, ethnic demographics and most likely a genetic predisposition as well as on co-morbidity (hypertensions, cardiovascular, diabetes, obesity) and lifestyle (smoking, stress, pollution).

We can assume that there are a substantially higher number of Covid-19 infected people in the world, more like 10 million and rising – than what has been identified and published. But only some 15-20% become ill with the known symptoms of typical dry cough, fever and flu-like symptoms – all depending on one’s personal immune system and overall health condition.

17 https://www.aftonbladet.se/nyheter/a/Y2Qz/Q2Qz/ny-statistisk-visar-vanligaste-riskfaktorerna
According to a recent study at the University of Göttingen, Germany, there might have been already 460,000 Covid-19 positive cases in Germany by end of March [4 times than what was reported], but so far only some 15.6 % of infections in Germany were caught. However, the officially recognized number of cases was only around 100,000 by end of March in Germany. Bommer and Vollmer (University of Goettingen) argue furthermore, that according to their calculations worldwide only 9% of Covid-19 infected might have been captured so far - hence one can assume that at least some 10 million people are really infected today.

Most recently a Stanford University Study found by testing 3,300 samples in Santa Clara County that “50 to 85 times more people had been infected with the virus than official figures showed.” But apparently “most of whom did not develop symptoms.”

In Germany, because of rigorous and widespread testing, one has been able to confirm some 15.6% of Covid-19 cases, Italy and Spain, both testing much less might have discovered only 3.5% or 1.7% respectively. The USA are even lower with ca 1.6% or the UK with 1.2 percent-while South Korea seems to have discovered nearly 50% of all its cases.

A decisive impact on Covid-19 potential lethality is of course contingent on the medical treatment and pharmacological availability: depending clearly on the availability of medical personnel, material, medications, respirators, and overall quality of medical infrastructure. The better the medical installations, the higher the quality and availability of medical supplies, the more sufficient the numbers of adequately educated and trained health care professionals, and the better the general health status of the population, the greater the chances of a positive outcome. Administratively, it seems to have become clear that centralized organized medical care infrastructure with some autonomy but reserves and central support as necessary is more effective than completely decentralized and/or privatized care.

At the end, Covid-19 might be in terms of overall mortality not that much more lethal than a common flu pandemic, though it might hit in certain cases severely. It’s sudden development and local onslaught, creating a much higher volume of seriously ailing citizens in a short period of time, has stretched most medical systems to their very extreme.

Johns Hopkins University research has found end of March 2020 that the highest per capita death happened so far in Spain with around 30 people per 100,000 compared to Italy with ca. 28 – while America saw 3.9 death per 100,000 and Germany 2.4. In Austria – comparable – to Italy, 9 out of 10 death were in individuals who were older than 70 years – 29.3% 70-79 years; 38.5% 80 to 89 years and 18.8% older than 90 years of age. Of 208 dead, 199 were older than 60 years, the youngest was a 27-year-old woman with pre-existing chronic conditions. Italy has a similar statistic with a key average of 81 years of age; and nearly 90% of the dead had suffered already from medium to heavy comorbidities beforehand. Therefore, it is difficult to discern whether

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18 “The number of confirmed cases for the novel coronavirus disease COVID-19 officially issued by countries and widely commented on by national and international media outlets dramatically understates the true number of infections”, in a recent study from the University of Göttingen by Dr. Christian Bommer and Professor Dr. Sebastian Vollme; Study based on figures of March 30, 2020. Christian Bommer and Sebastian Vollmer from Göttingen University; on average only 6% of SARS-CoV-2 infections detected worldwide; www.uni-goettingen.de/vollmer

19 https://amp.theguardian.com/society/2020/apr/20/studies-suggest-very-few-have-had-covid-19-without-symptoms

20 https://kurier.at/wissen/gesundheit/forscher-nur-sechs-prozent-weltweiter-infektionen-nachgewiesen/400807526
someone died due to Covid-19 or due to another medical condition; but also, not every fatality has been tested for Covid-19 — so the final numbers of deaths related to the Covid-19 could eventually be higher as well.  

Thus, it is important to be specific concerning the fatality figures reported of confirmed Covid-19 cases. Apparently, death figures of Covid-19 do not indicate to “what extent the virus caused the death – or was a contributing factor or was simply present” when the patient might have actually died of separate, significant health condition. Many physicians and experts remain confused by the distinction in the way the virus affects men as opposed to women. As indicated by a graphic from Imperial College London and courtesy of the BBC, the chances and risk of dying for men do differ from women.

All projections of the course of this pandemic should also take into consideration that nearly 10% of people aged over 80 will die in the next year, as Prof. Sir David Spiegelhalter, at the University of Cambridge, points out, and the risk of them dying if infected with coronavirus is almost exactly the same. That does not mean there will be no extra deaths - but, Sir David says, there will be "a substantial overlap". "Many people who die of Covid [the disease caused by coronavirus] would have died anyway within a short period," he says.

As was demonstrated in the editorial on “Humanity Tested” from the Journal Nature on April 8, 2020, early mass testing and early containment measures can indeed save lives: From: Humanity tested – in the Journal Nature, April 8, 2020,

“Singapore, Hong Kong and Taiwan have shown the world that, to contain the propagation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), governments need to quickly implement aggressive testing (by detecting the viral RNA through polymerase chain reaction (PCR)), the isolation of those infected and the tracing and quarantining of their contacts, while educating their citizens about the need for physical distancing and basic public health measures (in particular, frequent hand-washing and staying at home if feeling unwell). When outbreaks are not detected and acted upon sufficiently early, drastic physical distancing — of the sort implemented by China at the end of January [2020] and maintained for months — can eventually suppress the outbreak (Fig. [2]).”

23 Ibid.
It should, however, be mentioned that the numbers of infected only tells part of the story, since there might be many more people infected (who might experience only minor symptoms or no symptoms at all), but at least in part, due to the scarcity of tests, these individuals will never be tested and have so far not been included in any statistics. In addition, the accuracy of the tests is suboptimal, and the likelihood of false negatives is real. Hence, the current statistics can give us a sense of what’s happening, but they should be interpreted with caution.

Finally, as suggested by infectious disease experts Arturo Casadevall (John Hopkins University) and Liise-anne Pirofski (Albert Einstein College of Medicine)⁵ how the coronavirus interacts

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²⁴ Humanity tested. *Nat Biomed Eng* 4, 355–356 (2020). https://doi.org/10.1038/s41551-020-0553-6. https://www.nature.com/articles/s41551-020-0553-6#Fig1 “COVID-19 confirmed cases and deaths for selected countries in a 10-day window ending at each data point (successive data points on a line denote consecutive days). Numbers in colour are the estimated number of total PCR tests per million people up to the data point indicated; stars indicate when strict lockdowns were enacted. Deaths lag with respect to confirmed cases, according to the estimated two-to-three week interval⁵ between the onset of symptoms and death. Case fatality rates — that is, the fractions of total confirmed cases that become deaths — mostly depend on the extent of testing, on the capacity of a country’s healthcare system, on its demographics and on the availability of drugs that can significantly dampen the severity of COVID-19 in those infected. Even with mass testing, the case fatality rate of COVID-19 is expected to be a multiple of that for seasonal flu in the United States (0.1%). Countries that deployed tests for detecting SARS-CoV-2 RNA early and widely (such as South Korea), that applied contact tracing and targeted physical distancing measures for detected cases (such as South Korea and Japan), or that enacted early, strict lockdowns (such as China) are more likely to contain the disease outbreak earlier. In fact, Singapore, Hong Kong and Taiwan have contained COVID-19 outbreaks and have managed to limit COVID-19-related deaths to less than 10 (hence, these countries are not included in the figure). Data updated 6 April 2020. Individual data points can be affected by reporting errors and delays, by willful underreporting and by location-specific definitions (and changes to them) for confirmed cases and deaths. Data sources: European Center for Disease Control and Prevention¹¹ (cases and deaths); Our World in Data¹², various government sources (tests).


²² https://www.washingtonpost.com/health/2020/04/22/coronavirus-blood-clots/
with the immune system, poses a multifactorial problem and several variables at play will need to be taken into consideration. Although the initial epidemiological data show that Covid-19 is more severe in older people, men, and those with pre-existing conditions such as heart and lung disease, not everyone with severe disease has these risk factors. And not everyone at risk has the same symptoms, prognosis or outcome and hence several factors might be at play. First, the number of viral particles that cause infection might be decisive whether someone gets infected. The body’s defenses are more likely to be able to contain a small number of viral particles and hence the individual will not experience any or only very mild symptoms. A larger viral load, however, can lead to viral growth, create an over-reaction of the immune system, which will then lead to more severe disease. Second, the route by which the virus enters the body (inhaling aerosolized droplets vs. virus acquired through touching contaminated surfaces and then touching the face) might trigger a different reaction of the immune system. The route of infection might influence the significant outcome of the disease, since the local defenses of the lung and the nose differ. Third, the strength of the coronavirus varies and so does their capacity to damage host tissues and individual’s immunity. Fourth, genetics may also play a major role and be decisive for an individual’s susceptibility to develop a more severe case of Covid-19.

More recently, a mysterious blood-clotting complication has been identified in the US in coronavirus patients. A study published in Journal of the American Medical Association (JAMA, doi:10.1001/jama.2020.6775) found that a large number of Covid-19 patients admitted to the New York State’s largest health care system showed blood test readings that indicated clotting problems. As stated by Lewis Kaplan, a University of Pennsylvania Physician and head of the Society for Critical Care Medicine, stated: “The problem we are having is that while we understand that there is clot, we don’t yet understand why there is a clot.”

As of now, it seems to be unknown whether blood complications are a result of a direct assault on blood vessels, or a hyperactive inflammatory response to the virus by the patient’s immune system. In addition, a Dutch study published in the journal Thrombosis Research on April 10th also reports that 38 percent of 184 patients in an ICU had blood that clotted abnormally. Although acute respiratory distress syndrome still seems to be the leading cause of death in Covid-19 patients, blood complications are not far behind said Behnood Bikdeli, Columbia University Irving Medical Center. This latest evidence prompts hospitals and health care providers to think differently about the disease.

Testing for antibodies has gained much attention and is considered key to clear people to return to work. Some experts, however, warn that some antibody tests have not been sufficiently validated. Their main argument is that the virus is so new, that it is unclear what type of results will signal immunity and how long this immunity will last. The WHO has stressed that a presumed immunity can only be proven as scientists study those who have recovered from Covid-19 for longer periods of time.

It is important to be clear that antibody tests are different from tests used to diagnose infections. Antibodies tests look for antibodies in the blood that the organism produced in response to a particular pathogen and their presence signals that the person was infected with coronavirus and provoked an immune response. In contrast, tests aiming to diagnose an active infection, look for components of the SARS-CoV-2’s genome.

https://www.washingtonpost.com/health/2020/04/22/coronavirus-blood-clots/
Commercial antibody tests are starting to appear on the market, that have not passed a scientific review through the Food and Drug Administration (FDA) and hence might lack accuracy and hence generate some false positives (identifying antibodies that actually don’t exist) and some false negatives (missing antibodies that really are there). Another major concern regarding SARS-CoV-2 as voiced by FDA Commissioner Stephen Hahn might be that they might pick up antibodies to other types of coronaviruses. Only a few thousand people have been exposed to the other coronaviruses that have caused outbreak emergencies, SARS and MERS – but there are four other coronaviruses that circulate in people that suffer from common colds. Most likely most of us have antibodies to some combination of those coronaviruses – hence serological tests for SARS-CoV-2 would need to be sensitive enough to differentiate among the various viruses. Most serological tests do not provide a yes or no result, they provide a titer (level of antibodies) in a person’s blood. At this point, the required level of antibodies needed for a person to be protected from Covid-19 has not been established as of yet, nor is it known for how long a person might be protected. One could speculate that a higher titer might protect for a longer period of time than a lower one. Moreover, antibodies are not the only defense mechanism that the body has to protect itself. Immune cells also form memories after exposure to an infection and they can be quickly reactivated should they be attacked again by the same pathogen, even after antibody levels have faded.27

Given the complexities surrounding immunity and the lack of longer-term data on persons who sustained Covid-19, the WHO recommends that even people whose antibodies test is positive do not change their behavior and continue to practice physical distancing.

Ultimately, the development of a vaccine against SARS-CoV-2 is critical and it will take one year to 18 months. But scientists in several countries around the world are testing whether the Bacille Calmette-Guerin (BCG) vaccine, introduced in the 1920s to fight tuberculosis might be effective against Covid-19. Clinical trials are testing the BCG vaccine on two high risks groups for Covid-19: health care workers and the elderly. This initiative was triggered by statistics demonstrating that the fatality rate in countries with universal childhood BCG vaccination is significantly lower. If results of these ongoing clinical trials show positive results, this vaccine might provide an intermediary solution until a specific Covid-19 vaccine is available.

Possible “Secondary Effects” of the Covid-19 Pandemic

*Die zynische Warnung: “Operation erfolgreich aber Patient leider gestorben”*

The cynical warning not to be: “Surgery was a success, but unfortunately the patient died”

**GENERATIONAL ISSUES**

In many parts of the United States, and elsewhere, the Covid-19 pandemic might perhaps become one of the most incisive changes and alteration of the way of life, from business, to personal, even to intimate – certainly for the millennials upward to the boomer generation. While the risk group remains those older members of our society, the Covid-19 pandemic ties the fate of all generations. When any person, young or old, can either spread or fall prey to the novel virus, all persons must band together to make the personal sacrifices necessary to address the personal human responsibility we each have for one another. This notion is prevalent in the pleas of politicians and public health officials to the young and asymptomatic: should you exercise all your freedoms; you may not be at a personal risk, but then one is directly risking the lives of others. Thus, the very notion of personal communal responsibility for one another crosses the generational divisions and brings each generation to its own specific

In the United States, for those born in the late 1980s and later – those who are considered the *Millennials*, and *Generation Z*– this is the first major crisis, national and international, which they experience personally and with hitherto unimaginable infringements on personal freedom, employment, and lifestyle – even food and sports. Unfortunately, however that generation and Z in their first decade, (from 2000) had to experience already one (political) crisis after the other: from 9/11 terror attacks, to the Afghanistan war, the Iraq war, the Katrina Storm, and the economic Lehman crisis 2007; and then other storms on the (East) Coast Storm Sandy, etc., and an acrimonious partisan split American domestic politics ca since 2015 – so their relationship with the Boomers is already tenuous.

Besides all that, the coronavirus pandemic is a crisis that is novel in its own right, featuring economic consequences, the likes of which haven’t plagued the United States since the Great Depression. Therefore, the generational challenges of job loss or retirement fund depletion or stock market collapse have rendered a young population at the precipice of a new age. A world in which the freedom to move is limited, the freedom to purchase in the global market is hindered and ultimately the decisions which were seemingly assured in the past, are now all drawn into great uncertainty.

A generation which grew up on easy & high mobility and affordable flight prices and a relatively unencumbered civil society, how will they navigate a post-Covid-19 society? How will the challenges of incisive hygienic protocols, wearing masks, and limiting human closeness / while constant virtual activities /affect different generations – from * Boomers to Millennials, to Generation Z*\(^ {28}\) – and their future relationship?\(^ {2}\)

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*Baby Boomers* are persons born in the years following World War II; *Millennials*, are those born between the early 1980s and mid 1990s. *Generation Z* is the generation following the Millennials, hence born in the late 1990s, early 2000s.
While the national income distribution scissor has sharply widened, many of them, even college graduates, are now faced with much more dire job situations already and have been becoming much less wealthy—certainly in comparison to the wealth accumulation of the Baby Boomer Generation. On this particular subject, different generations handling the economic downturn in varying ways will be key to uncovering a methodology which suits everyone. While the new wave of online work may suit young people, the process of reigniting the economy will require contributions from small businesses and large corporations to chart a new course for a productive global economy.

COMMUNAL AND SYSTEMIC CHALLENGES

While we are all isolated in our homes, the notion of community may seem elusive if not aspirational. However, the argument can be made for the need for a devoted focus on communal concerns and interpersonal solutions as a means of effective treatment and policy moving forward. To start, there is the clear distinction between the actions of global leaders and their governments from the power of local leaders and their communal will. This can be seen in the resistance to reopen economies or in the push to open economies sooner rather than later. The impetus to make decisions based on individual community needs drives the narrative for most conversations in a way that will likely dominate future policy decisions in the time preceding a widely accepted vaccine.

Furthermore, as we are all relegated to the confines of our homes, most people are able to leave their homes for brief walks in their neighborhoods. With their attention devoted solely to the homes around them and the community they occupy, people are finding a more community-focused outlook on the issues that Covid-19 has surfaced. For example, in addressing food shortages, many have looked to their neighbors for help or lead the charge to support each other in their time of most need.

While many communities battle the novel pandemic, there still remains the problems that have affected them already for years if not decades. Public health concerns in communities across America such as the opioid crisis, which according to the CDC accounted for still more than 67,000 deaths from drug overdoses in 2018 alone, making it a leading cause of injury-related death in the United States. Of those deaths, almost 70% involved a prescription or illicit opioid. That being the case, it is of critical importance to consider the possible secondary effects of a lack of drugs in the current pharmaceutical market. With a limit on the amount of those drugs on the market or accessible to those who abuse them, the dependent community might become more vulnerable to fake ones and also, we might see more “erratic” behaviors by those who do not have access to their “required daily dose”.

As Covid-19 has highlighted the plight of the most vulnerable in our communities, it has begged the question: what are examples of public health crises being exacerbated because so many have no access to healthcare? With very little evidence that these public health crises will somehow disappear, those individuals with little access to care are only getting sicker. These systemic challenges, which are generally faced by so many in our communities who are uninsured, underinsured, undocumented and unable to take sick leave, will only spread Covid-19

29 https://www.cdc.gov/drugoverdose/index.html
more frequently because while some states in the United States and countries across the world take steps to reopen, these individuals are not getting care, isolating, or getting diagnosed and treated. Thus, without question, the ills we faced before the pandemic will only be exacerbated in the months to come.

In sum, the systemic challenges of racial and economic inequality in the United States, have only been further exposed by the Coronavirus pandemic. As evidenced by the disparity in New York City, the hardest hit in the United States, the city released preliminary data which indicated coronavirus to have killed black and Latino people at twice the rate it killed white people. This disparity is nothing new, it merely reflects the longstanding and persistent inequalities in public health access and treatment while simultaneously highlighting the privilege of those who can stay at home while those less affluent public workers faced with little choice but to go out and work every day and thus, subject themselves to the virus. In sum, the coronavirus has inevitably exposed the systemic flaws in our communities and our society.

**PSYCHOSOCIAL CHALLENGES**

The emphasis on seeing persons and friends via a small illuminated screen or a touchscreen for hours per day, while there is absence of personal contact and physical touch, loss of personal closeness will certainly impact the development and education of toddlers and children. It also affects the intergenerational dimensions. In certain societies – France, Italy, Spain, the Mediterranean, and traditional Central European societies, etc. – customs from touching to hugging to kissing, to hand kisses; physical contact and closeness forms an ingrained part of social interaction and culture. Psychologists and sociologists have attested the importance of such behavior in these cultures.

As the importance of human contact is analyzed, there is also a malicious consequence of close human contact in the homes of those suffering at the hands of domestically violent partners. For many women and children, the greatest threat they face in the stay-at-home orders sweeping the globe is the one that lives beside them. For those who suffer in this context, they are trapped with their abusive partners. Many international organizations which monitor domestic violence and receive reports of said violence, have reported a horrifying surge in domestic violence. The United Nations has monitored this global rise in domestic violence and found that "the number of women calling support services has doubled" while "healthcare providers and police are overwhelmed and understaffed." But there is now also an increasingly alarming development: the longer the Covid-19 Pandemic lasts, and families are sequestered in their homes, the lower the instances of search for help – the victims of domestic violence simply cannot manage, or want not to actively look for help.

On the issue of crime, there is a concern that should police forces be overwhelmed by a spread of Covid-19, those communities would be faced with a potentially dangerous lack of accountability and order, which they come to expect without question. For example, the New York Police Department, NYPD, at the center of the pandemic in the most highly affected state in the

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United States of America, has faced a severe spread of the virus within the police force. As of this publishing, about 18% of the workforce are out sick.

The resilience of our human community is known by those who have witnessed the perils of war and the myriad of global crises we have faced as a human race. However, it is an undeniable reality that the borderless and invisible challenge posed by the Covid-19 outbreak is unprecedented in these times. The manner with which people are able to recuperate will depend on us – specifically it will depend on how we prepare for this; and what we make out of the damage and destruction and life changing effects of the Coronavirus, in our community, state, nation, and future global interaction.

INTERNET TRANSPARENCY

As the first weeks of quarantine have transpired, we can already witness a trend in increased online activity through the readiness of internet usage while sequestered in our homes and more productively, in the execution of business dealings as in-person meetings have vanished and now Zoom, Google Hangouts, and Skype assist in the functioning on those business which can operate with the aid of the internet. Furthermore, in support of social connectivity: Facetime, the Houseparty application, and Netflix viewing parties take the place of person-to-person connections. While we have to be distant physically, we can – and indeed should – be socially close with our families and friends – certainly on the phones or via the web. Interestingly, much more increase in the phone calls with some 33% more, than before – generally the highest amount of phone calls per year happens to be on Mother’s Day. Now it is twice that amount daily and some 33% longer in duration.31

There is however a high chance that much of these communications will remain forever on the world wide web, we all or most of us, certainly our young and youngest ones have become completely transparent – gläsern translucent. In these times many of us, certainly the younger ones, put seemingly without restrictions nearly everything, including the most personal and intimate details about oneself and also of others on the web; completely ignoring any prudence. This opens all of us to the important question of privacy and the power of information in the hands of the actors of those who wish or intend to use the mass of this personal information on hand to their advantage: just imagine the opportunities for malicious or criminal data mining (as most information remains on the web) for any actor interested in finding anybody’s intimate information on anything personal at any time in the future. That could have dramatic consequences if information deriving from this all would could ever be introduced and added into a social credit system.

A further concern for the safety of our internet use, came with the onset of hacking the online calls which connect so many during the pandemic. For example, there were early reports of Zoom calls being hacked – referred to as “Zoom-bombing”32 – whereby hackers will interrupt classrooms, religious gatherings or any other meetings they can and spew hate speech or show pornography. Since the onset of the pandemic, Zoom, a videoconferencing application, skyrocketed in popularity as millions settled into new remote work and social routines of the

31 FAZ, NYT 4/9
pandemic. While the main motivation so far appears to be mischief, it cannot yet be said whether Zoombombing, like other cyber-attacks, results in a demand for money in a ransom exchange for passwords, credit card numbers or data – from criminal to quintessential intelligence operations with the intent to use information for defamation or slander or worse.

Furthermore, reports that thousands of Zoom videos were left viewable on the open Web included one-on-one therapy sessions, training for health officials, small-business meetings etc. This calls into question the privacy risks that many around the world face as we navigate the new online options for videoconferencing and other forms of internet transparency and connectivity. What exactly are we risking in order to replicate personal interactions through video calls in the age of social distancing?

**TECHNOLOGY AND ITS INNOVATIONS**

Instead of being physically close - from (even private) discussions with friends and others, to business, instruction, training, sports, even religious activities; the realization that doing this from one’s own relatively comfortable four walls while not needing to travel for a meeting/ the equal realization by business owners that company members can do their work at least as efficiently and much less costly, even without (national/international) cumbersome travel … all that Life is now all conducted in virtual reality – from business negotiations to intimate flirts to hostile communications; from remote working to teaching online to virtual events and video conferences; but also, big data virus monitoring for health, i.e. in-home diagnostios, viral examination and the virtual medical services, telemedicine, tele-psychology and tele-yoga, and telesports, to even all kind of virtual other most in-time offers. Of course the big question remains, what is happening with all that big data, that is somewhere somehow remaining in the virtual space? – Beware of the potential for datamining.

Robots have been used since long for mine sweeping, to pool and house cleaning and lawn mowing, but people have been reticent to interact with them more in a personal/voice manner. They are increasingly used in military and security operations but can have dual use potential. Robots are now be used for hospital cleaning, and simple evaluations: “in South Korea [they] have been used to measure temperatures and distribute hand sanitizer. UVD Robots, the Danish manufacture of ultraviolet-light-disinfection robots, shipped hundreds of its machines to hospitals in China and Europe.” But one has to recon the fact that while it may take time and costs to introduce a robot – once it is working it is “typically cheaper than a human,” so we better assume that they will remain in place – even after the crisis has passed.

While more traditional customers like myself would typically be reticent to speak to a machine/robot and rather converse with a human, this crisis enhances and speeds up that readiness. Now restaurants and café houses might be ever more inclined to use them – also to

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33 [https://www.washingtonpost.com/technology/2020/04/03/thousands-zoom-video-calls-left-exposed-open-web/](https://www.washingtonpost.com/technology/2020/04/03/thousands-zoom-video-calls-left-exposed-open-web/)

34 Zoe Thomas, “Coronavirus: Will Covid-19 speed up the use of robots to replace human workers?” [https://www.bbc.com/news/technology-52340651](https://www.bbc.com/news/technology-52340651) There is an ominous warning “Once a company has invested in replacing a worker with a robot it’s unlikely the firm will ever rehire for that role. Robots are more expensive to create and integrate into businesses but once they are up and running, robots are typically cheaper than human workers.”

35 Ibid.
maintain a distance to the customer. And will be more used to deal with to the house of disinfection and room cleaning; etc. – particularly in places which are considered to be contaminated and dangerous to health and safety. Obviously wherever possible companies might be tempted to replace their workers with robots – especially in times of lock down and of dangerous environments.

AI can help increasingly as well when employees cannot work due to social/physical distance rules in the Coronavirus crisis. “Facebook and Google are relying on AI to remove more inappropriate posts since the companies’ human content moderators can’t review certain things from home” and the “lockdowns have made humans more comfortable with the idea of connecting remotely. The instructor or adviser on the screen doesn’t need to be a real person, it just needs to think and act like one.”

Drones and robots might increasingly be used to deliver for that that last mile. The problem is that once a robot or other autonomous system does that task, the company will presumably not rehire a human. Companies switch successfully to alternate technologies to assist in the Coronavirus crisis: For instance BMW is to produce several 100,000 face masks per day bmw-to-produce-face-masks. Many local companies also like Switlik here in Trenton, New Jersey have switched to such production. The F1 Team of Mercedes has reverse engineered a breathing device, the Continuous Positive Airway Pressure (CPAP) device which has been already used in hospitals in the U.K. If trials go well, up to 1,000 of the CPAP machines can be produced per day by Mercedes-AMG-HPP.

In terms of international collaboration, ACTIV offers an excellent example of a collaborative way forward: The National Institutes of Health and the Foundation for the NIH (FNIH) to launch a public-private partnership which will involve more than a dozen leading biopharmaceutical companies, the Health and Human Services Office of the Assistant Secretary for Preparedness and Response, the Centers for Disease Control and Prevention, the U.S. Food and Drug Administration and the European Medicines Agency to develop an international strategy for a coordinated research response to the COVID-19 pandemic. The planned Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) partnership will develop a collaborative framework for prioritizing vaccine and drug candidates, streamlining clinical trials, coordinating regulatory processes and/or leveraging assets among all partners to rapidly respond to the COVID-19 and future pandemics. This is part of the whole-of-government, whole-of-America response the Administration has led to beat COVID-19.37

**Socioeconomic Challenges**

Halt of much of global trade, international personal travel, tourism, and to a freezing of supply chains and market access and the resulting severe economic challenges and political pressures as a consequence of the Coronavirus as secondary effects. This will clearly contribute to tensions within the American society – many are now unemployed, others have to go to work while worrying that they will become infected; while the privileged can move their work to their home office with the appropriate technologies and continue as always – perhaps even more

Futurist Martin Ford even saw some marketing advantages. "People will prefer to go to a place that has fewer workers and more machines because they feel they can lower overall risk,"

comfortable than if they would have to commute daily to work or have frequent business trips. And will pretty likely survive that crisis healthily, perhaps with some financial shortcomings, if at all. What will this mean for the social peace and continued co-habitation in a flowering society?38

WHAT’S NEXT: THE STATE LEVEL

A Covid-19 Country by Country Safety Ranking of Deep Knowledge Group in London puts Israel as number one, followed by Germany and South Korea; Austria and Switzerland are 11 and 12 respectively – there is also a comparison between major world regions.

After a stringent lock down Austria has become the first country in Europe to open with small steps after one month lock down and to permit certain economic activities – so “that the health crisis of today is not becoming the social crisis of tomorrow.”39 Austria, after rigorous complying with lock down (under penalty) the government has permitted to begin now first with re-opening certain small businesses (up to 400m²) since the Easter Holidays. After May 1, basically all shops will be permitted to operate; shopping centers and hairdressers to selectively re-initiate economic activity but with obligatory mask wearing and the use of a specialized app. Home improvement stores, food, pharmacies, libraries, paper and book stores, and markets; but not yet hotels, restaurants or shopping malls; parks are open again. Also permitted will be certain sports like tennis, horseback riding, golf, but not yet team sports. But – according to Chancellor Kurz, head of a rather successful green-peoples party coalition, suggested people have to wear face masks in restaurants, etc. but there, it is the servers, not the patrons. After May 15 even restaurants might open; as well as churches. All under stringent social/physical separation and continued decline of new confirmed coronavirus cases. Most importantly is to increase still the capability for tests – from currently 10,000/day upwards. Countries like South Korea area a model. Austria is considering to slowly open the borders to the neighboring states like Germany, the Czech Republic, Slovakia, Hungary and Liechtenstein/Switzerland.40

With 27 April the government of the Principality of Liechtenstein opens beauty and hairdresser and the hospital and doctors’ offices and all shops – under the conditions that the distance and hygienic regime is strictly followed. But restaurants and museums and libraries remain closed. The tenacious opening of schools is foreseen around May 15. Beginning only May 11, Switzerland will open basic schools and kindergartens – since it has been proven that small children can’t transmit the virus (what had been found out via the tracing in Switzerland). After June 8, the secondary and professional schools will be opened. Another reason is to let parents

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38 Alexander Armbruster “Noch viel schlimmer”, Frankfurter Allgemeine Zeitung, Comment, 4/2

39 https://www.diepresse.com/5798178/harterfonds-fur-familien-damit-aus-gesundheitskrise-keine-soziale-krise-wird?from=newsletter&xtor=EPR-20003-%5BDas+Wichtigste+des+Tages%5D-20200409-%5BH%C3%A4rtefonds+f%C3%BCr+Familien-%22Damit+aus+Gesundheitskrise+keine+soziale+Krise+wird%22%5D-20200409&utm_source=newsletter&utm_medium=Das+Wichtigste+des+Tages&utm_campaign=H%C3%A4rtefonds+f%C3%BCr+Familien-%22Damit+aus+Gesundheitskrise+keine+soziale+Krise+wird%22&utm_term=20200409&utm_content=9bd33191f64e2b59fd45840d66c7007076a7149f3c3be9e5fd4a24

Barbara Steinbrenner, „Härtefonds für Familien: "Damit aus Gesundheitskrise keine soziale Krise wird" “ special fund for families – that the health crisis does not become a social crisis" Die Presse, Wien, April 9, 2020.

go to work and hence permit that the children can attend school.° Sweden continues with its limited restrictions - apparently there are legal limitations: schools up to 9th grade are open – only high schools and universities are closed. Strict controls for physical distance, are in restaurants and cafes, which remain open, as are stores, libraries and swimming pools (sauna). Denmark lets young children up to 11 back to nurseries, kindergartens and schools. Most ° Germany plans to a limited relaxation of the shut down after April 20; Smaller shops will be allowed to reopen subject to strict conditions on the number of customers allowed in at a given time. Car dealers and bookshops would be allowed to open regardless of size, as well as zoos, libraries and botanical gardens. Car Manufacturers like BMW and Volkswagen begin slowly to restart production, albeit under stringent working sanitary regulations, and different work arrangements. However, Bavaria has cancelled this Octoberfest 2020, and many other international events are cancelled.

Finally, it seems appropriate to bring in a key study by the German National Academy of the Sciences, Leopoldina which has outlined “Seven recommendations for the end of the shut-down”°. The Leopoldina sees the possibility of an easing of the Massnahmen/limitations/measures in the fight against the Coronavirus after the Easter Holidays this weekend. Till then there should also be new suggestions like the “sustainable reactivation of the public life and the economy,” taking into consideration societal and economic reflections.°

1. Protection of Mouth and Nose
Serves to reduce the transfer of viral bacteria and also of personal protection – because of the deficit it can also be produced personally but has to protect the mouth, nose and chin.

2. Technological Solutions
Introduction of digital tools like apps with which users/consumers can offer data about possible infections – voluntary while being granted all rights of data and personal protection and personal rights. This would help to target specific measures.

3. Capacities to Test for Coronavirus
The capacities for tests fort the Coronavirus should be continuously increased. In these transition times one may even use installations of veterinary medicine. With all that one can address the infection centers and can use/adapt precisely quarantine.

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° https://www.lematin.ch/suisse/reouverture-ecoles-risque-mesure/story/25927813
° Ibid.
° https://www.leopoldina.org/leopoldina-home/
The article is from https://m.faz.net/aktuell/gesellschaft/gesundheit/coronavirus/coronavirus-leopoldina-empfehlungen-ende-shutdown-16718523.html


° from https://m.faz.net/aktuell/gesellschaft/gesundheit/coronavirus/coronavirus-leopoldina-empfehlungen-ende-shutdown-16718523.html
4. Random Testing
Random testing is important. This will permit to get a realistic picture of the acute infection and test the immunity – this will be a pre-condition for a realistic assessment of the situation.

5. Factors of Risk
In new cases it has to be also taken note off which factors of risk like smoking or other pre-pathologies have existed beforehand. That requires considerable a uniform.

6. Adapt the Hospitals
It is important to restructure the hospitals, but this has to be adapted continuously. Video medical consultation and other digital activities can play an increasing role.

7. Communication
High degree of cooperation in the population to accept the measures and orders set forth by the authorities.

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46 The article is from https://m.faz.net/aktuell/gesellschaft/gesundheit/coronavirus/coronavirus-leopoldina-empfehlungen-ende-shutdown-16718523.html

**Testkapazitäten**: Darüber hinaus sollten die Kapazitäten für Corona-Tests weiter erhöht werden und während einer Übergangszeit auch Einrichtungen der Tiermedizin genutzt werden. „Damit können Ausbreitungsherde besser eingegrenzt und Quarantäne-maßnahmen passgenau verhängt werden“, heißt es.


**Risikofaktoren**: Bei Neuerkrankten müsse umfassend erfasst werden, welche Risikofaktoren wie Alter, Rauchen oder Vorerkrankungen vorliegen. Dafür brauche es ein einheitliches elektronisches Verfahren. „Da die Risikofaktoren die Schwere des Krankheitsverlaufs maßgeblich beeinflussen, ist diese Information im Hinblick auf die Abschätzung einer möglichen Überlastung des öffentlichen Gesundheitssystems wichtig“, teilten die Experten mit.

**Struktur in Kliniken Schaffen**: Zwar sei es zwischennzeitig notwendig gewesen, die Kliniken in Deutschland deutlich umzustrukturnieren, das müsse aber regelmäßig überprüft und angepasst werden. Andere akut oder dauerhaft Erkrankte dürften nicht aus der Versorgung fallen. Wichtige Diagnosen müssten frühzeitig erfolgen, langfristig angelegte Therapien nicht unterbrochen werden. "Fen"reichstende und andere digitale Angebote könnten eine zunehmende Rolle spielen.