

The following Commentary synthesizes information, observations, and projections from Wolfgang Danspeckgruber, D.Laws, Ph.D., Founding Director of LISD, and Dr. Annegret Dettwiler-Danspeckgruber, PI at PNI.

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## COVID-19 AND OUR COMMUNITY PHASE I

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Dear LISD Friends and Community,

By now, many of us have spent our first week in a significant change of daily rhythm, with major limitations to our highly treasured freedom of mobility and for many of us living with children and family in much closer confines than we are used to. Living in these new circumstances, many of us are also expected to carry on with our professional responsibilities which might include reflecting, thinking, researching, coordinating, and writing, or even teaching in virtual space, which are all activities not that easy to carry out under such changing circumstances.

While we seem to be confronted with an unprecedented challenge to health and well-being for us, our family & friends, our community & country – really the society as we have known it, there appears to loom also a serious material challenge with major economic activity coming to a screeching halt, industrial production experiencing major reduction, international travel basically stopping, and the markets faltering – all together neither precisely comforting nor calming. “The end is nigh” have exclaimed some friends already – *“Mais non – Aber nein doch”* I like to reply, on the contrary, we shall master that challenge! Perception forms reality, as we know, and obviously there seems to be ample reason for thinking like that – but perhaps there is some perspective to all that turmoil!

Without going into details, as of this weekend 3/22 the global rate of published certified cases of Coronavirus cases in more than 160 countries is around 315,000 with a mortality of ca 13,500 and rising. But these numbers do not reflect individuals who might be infected but have not been tested. In addition, test availability, and criteria around whom to test varies profoundly from country to country. America has by now more than 38,000 cases with 400 reported fatalities. However, the test policy varies from state to state, tests are not available everywhere, and it takes 2-3 days until tests results are known. With more than 6,000 deaths (more than 60,000 certified cases), Italy seems to have overtaken China in terms of reported fatalities ; Germany on the other hand has a relatively “low number” of 115 dead with approximately 27,700 confirmed cases, while Iran has reported more than 1,800 deaths and 23,000 confirmed cases. One likely explanation might be that Germany originally started testing people even with milder symptoms relatively early on. In addition, numbers and statistics may vary considerably depending on the source.

The number of confirmed coronavirus cases obviously depends on those tested. While South Korea has been testing intensely, the United Kingdom has not. In the U.K. typically one is tested only if over 65 years of age or admitted to a hospital. The argument goes, that if an individual develops serious symptoms, she/he is better treated right away – obtaining test results might take up to 3 days and if performed too early might yield false negative test results. Finally, whether or not an individual develops Covid-19 and becomes symptomatic, depends on the patient's general health status and comorbidities.

The problem is that while the case number in China seems to have peaked by now – even if a possible second wave might come - in most EU states the peak of new daily cases may be reached only in 1 to 2 weeks, though Austria and Germany have begun to report a less steep increase of new confirmed cases. In the United States such a relative slowing might only happen in the second half of April – depending on the respective situation within each of the States and in the densely populated major urban centers. All obviously depending on the effectiveness of sequestering and social distancing and the health of the population. Clearly, the more testing takes place the more confirmed numbers will mount and change the quantitative landscapes, but as we know, the severity of Covid-19 in individual cases depends on the individual's immune system's strength and any additional chronic conditions.

### **Testing and Medical Care**

Unfortunately, already now, in regions with high numbers of cases and hospitalizations, the capacities of some hospitals and in particular intensive care units, are reaching their limit with regard to space and insufficient equipment (especially respirators). Moreover, the danger for contamination of the medical personnel is imminent. Protective gear, PPE-personal protective equipment, for them is critical. As is currently done in the U.K., Germany and Switzerland, one could also consider the possibility to assist with mobilization of retired medical professionals/and resources from the military – from mobile field hospitals to medical personnel and equipment – to stem exhaustion and support of a potentially completely overstretched system. The longer this phase of rapidly new increasing cases lasts, this kind of support becomes even more important as medical personnel needs to be able to work in shifts. Particularly in major metropolises, like our neighboring New York and Philadelphia, the possibly cramped living conditions will facilitate the spread of the virus and thus medical personnel and their PPE and health facilities will soon be facing their limits. Perhaps the neighboring hospitals and those in less affected communities will have to support as well. Another idea for taking care of infected patients who show symptoms – especially of those who reside in relatively crowded living conditions – could be to host them on Cruise Ships anchored close to Manhattan or Philadelphia.

Federal, state, communities, and military should really cooperate and be able to distribute from underused storages and also to purchase from abroad. The way to go may be public-private procurement arrangements which are promising and even the use of 3D printing in corporations, as in northern Italy and Berlin proved successful for entire new components (from valves to respirators) in the 100s or retrofitting older models. German government incidentally

has now asked carmakers to make medical equipment, such as masks and ventilators; also private financing & donorship may be very effective, and become necessary.

In the medical realm, more efficient testing (test results will be available within one hour) and increased test availability will allow for more rigorous testing policies and hence should significantly decrease the spread of covid-19. The United States Federal Government is also pursuing a Google supported central data base aiming to record all testing, confirmed Covid-19 cases and individual patterns of disease development and outcome. Such a unique data base could subsequently inform crucial public health interventions as for instance identifying individuals at risk and provide specific support ranging from food to mental health support etc.

The four most promising treatment options, as put together by the WHO, are currently being evaluated in global megatrials. These include 1) *Remdesivir*, a drug that was originally developed to treat the Ebola and related viruses; 2) *Chloroquine* and *Hydroxychloroquine* in combination with an antibiotic (*Zithromax*). *Chloroquine* is a medication that has been used for many years to treat Malaria and also some forms of arthritis. If a positive trend of this medication becomes apparent, clinical trials will move relatively fast and this medication could be approved very soon. It is, however, important not to take any short cuts, since this medication has only been formally tested by a French group in 24 Covid-19 positive patients – hence in a very small sample and more rigorous testing is imperative. 3) Ritonavir/lopinavir sold under the brand name *Kaletra*, was approved in the US in 2000 to treat HIV infections. 4) *Ritonavir/lopinavir* in combination with interferon-beta, a molecule involved in regulating inflammation in the body that has shown effects in marmosets infected with MERS and is currently tested in MERS patients in Saudi Arabia in the first randomized controlled trial.

It is also important to note that the design of the Solidarity trial can change anytime, and a global data safety board will assess interim results and any of these medications can be dropped if no effect can be objectivized and other medications might be added.

As explained in my first letter, such a pandemic crisis has a middle/high intensity phase following the first introductory and incubation phase. Here in New Jersey we seem to move into phase 2. The extent of the increase of cases depends on the effects of the social distancing and our relative health. Many may actually carry the virus without even knowing, while not at all showing serious symptoms, nevertheless, they can transmit the virus. According to Swiss information, some 80% of the patients with Covid-19 can deal with the virus independently and appropriately, 15-20% might come down severely, particularly elderly, or those with diabetes, previous heart and/or lung disease, smokers and other comorbidities. Nevertheless, in any community, at some point the curve exhibiting new cases will peak and hence everyone will begin to see somewhere and somehow the possible end of the tunnel.

### **Potential Secondary Effects of the Crisis**

Today 1 in 4 inhabitants of the United States is confined into his/her home. Something unthinkable still 2 weeks ago. This limitation of the freedom and mobility of Americans in hitherto untested magnitude - is potentially and over time difficult to master – also very much

depending on the situation, size and composition of families and their inter-generational dynamics, the size and location of their home and the ability to have one's own space and also to go outside – thus even the weather can be of influence.

What may have been new and fun at the beginning may well become a chore, the longer it goes on, and may bring to the fore all kinds of inter-generational and familial issues - freedom and space, and personal rest and possibilities for fun and joy are more important than ever. But personal conversations, compromise, and laughter, and family games, and music whenever possible - instead of solitude and internet/social media – are critical as well. The stress which people, especially the young ones, many times get exposed to because of their virtual life and solitude can best be counteracted by good personal communication and efforts to reduce that stress in person to person interaction.

Many a crisis has worked out differently than predicted, and while of course one has to be ready for many things, rarely will all of the most dire predictions hit and many times other ways out of a crisis appear – everything is relative!

A general attempt to regularly try to “tone it down”, a “pause”, a “switch off”, of all those “serious analyses” is highly recommended and necessary! How about occasionally, for some time once, no time on the web, nor on social media! How about reading, playing, painting, building models/lego. listening to or making music, even singing (perhaps together), or gardening – whatever, just having fun and, if possible, getting out! “Not just to pass the time and stay alive – but to happily feel alive” as a friend keeps saying. BTW: *Roma eterna has seen many a crisis in its thousands of years of flowering existence – and enjoyed its games.*

There is however an additional and important concern still:

It has been warned that there might be actors from within or outside our communal system, state, and country who might take advantage of the stressful situation for their own objectives. They might attempt to use the eager search for information and news, and try to deliberately disseminate disinformation or add or undertake all kind of other elements or actions, via the web or otherwise, in order to enhance the stress and chaos for their own objectives – perhaps even to the detriment of liberal democracies and the rule of law.

On the other hand, recent reports indicate that throughout the United States, Americans of all ages buy weapons and ammunition in unheard quantities – to the point that gun stores are empty; many times, buyers become today new gunowners. The combination of many more guns and weaponry in our families and communities, in so many more households while being under so much more stress and in an unusual state of confinements, also with children and possibly alcohol around, is – simply put – highly concerning if not outright dangerous. This should add a whole other concern to all of us, to focus the more on reduction of stress and to do whatever possible to counteract mounting tensions and possible aggression at any time nerves are understandably raw.

Therefore – while of course the Covid-19 Virus with all its considerable health challenges is and has to be of absolute primary concern to us all – and requires stringent social distancing and the personal protective protocol – we all ought to remain alert and concerned about the possible

“secondary effects” of this mega crisis for our families, community and society: we have to keep a healthy equilibrium and psychologically sustainable balance about dealing with the aforementioned curtailing of our personal freedoms while being able to deal with the continuous bombardment with more (negative) news and (dire) predictions.

*It is not what the virus does to us, but what we make out of it*

it affects each of us, our families, our current communities and country, now and in the future. Let us hence not succumb to blame games, or even racist accusations, let us not give in to foster division. In this time of acute crisis, we have to stand together – all of us. We shall overcome this virus, sooner rather than later. The current suppression of personal and societal freedom will be over in a limited period of time. The better we all keep our physical and psychological condition, and get enough rest, the more we are able to deal with it in our own family and community – in person and/or virtual. Let us also beware of unwanted and unnecessary secondary effects and mitigate and counteract possible heightened tensions whenever possible and do everything to anticipate and avert possible aggression. We are entering another week with presumably many more fatalities, intensive care cases and confirmed Covid-19 patients, and have to be prepared for increased inner-family, inner-communal tensions and emotional tempers which will continue the longer the restrictions and confinements last. But with mental and emotional discipline and social distancing, fun games and various activities, and a fundamentally positive attitude we shall be able to keep negative secondary effects at bay!

We shall overcome the Corona Virus – personally, with our families and in our communities. The healthier we try to remain, the more rest we try to take – physically and emotionally – and the more social distance and appropriate disciplines we keep, the sooner we shall see an end of the tunnel and can expediently proceed to restart.

With our heartfelt best wishes to you!

Wolfgang & Annegret.