

## Interview from the Series "Science in an Emergency."

Prof.PhD Anastas Gerdzhikov

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Dear friends of Sofia University's Cultural Centre!

I will add a few words to the discussion on the role of science and education during the state of emergency.

Science is vital in any circumstances, but in a crisis, we often think of it with more respect. When we expect a cure and a vaccine against the virus, people are more likely to realise why they need researchers and scientific knowledge. However, I believe assuming that the pandemic has restored people's faith in science is an overstatement. To start with, I think that the problem is not in faith or trust. People believe in science, even without such a crisis. The problem is how valuable it is to them.

Different societies and different powers that be appreciate the value of science to different degrees. During the 2008-2009 financial crisis, President Obama increased research funding by 1-2 billion, or 50 per cent, in the hope that it would help overcome the crisis and boost growth. During the same period, our country's research budget was halved while University funding was truncated by 30%, apparently with the argument that when funds are scarce, the least important sectors that won't directly hurt the economy and society should be the first ones to slim down.

It is another issue to what extent politicians around the world are looking to and relying on science-based expertise. In my opinion, politicians in most countries have sincerely turned to experts for advice on the measures their communities need and have placed high expectations on researchers to find the proper treatment and vaccine for Covid19 quickly. Indeed, disputes between scientists have confused policymakers, and they did not know whom to trust, but a sincere desire to listen to experts' voices was there.

This was the case in Bulgaria as well. From the very start of the crisis, the government co-opted medical professionals. When the voices of their opponents were raised, the government felt compelled to set up a second advisory body to accommodate all the conflicting opinions. The government performed under par in recognising genuine expertise. Some areas, e.g. epidemiology and virology, were less well represented than others in the national operational headquarters. The data from mathematical modelling were presented publicly by a non-mathematician.

Whether a government policy is based on sufficiently robust scientific data is another argument. If you use questionable tests or collect, transport and store your samples incorrectly, you are not likely to get accurate results. Once you manage to work your way around these hurdles, if you compare the number of daily cases of infected people at the beginning, when you did 200 tests a day, with the infected during the next stage, when you do 2000 tests a day, you are making a methodological error.

Despite all the remarks we might reasonably have, the Bulgarian government has coped relatively well. The shortage of experience and resources turned out to be a smaller problem than the usual one – communication. The communication errors made by the government and the national operational headquarters fade into insignificance compared to the Chinese whispers whereby the messages arrived at our end of the line. The media ruled in this game. Very few of them approached the issues responsibly and professionally. Too many of them were looking for ways to go sensational and scream out loud daily. But, as per usual, the real publicity setbacks did not come from malice, but incompetence. The questions many reporters asked of the headquarters team, and their subsequent inability to pass essential information on to the public, once again reminded us that for many media outlets the real problem is not freedom of speech, but the shortfalls of intelligence.

The same shortages transpired through social media ten times as much. This happened as all fake news, and deluded comments were proliferated and disseminated by their very users. Social networks are not doing a good job in substituting artificial for natural intelligence or critical thinking. Only the latter makes one capable of telling real from bogus and even plausible from fantastic. This universal trend was locally topped up by a typical Bulgarian peculiarity: when we hear or read something positive about someone, this immediately sets off our paranoia, but when someone is being smeared we become unconditionally trustful.

Of course, the fake news problem is a minute part of the global relativisation of truth in recent decades. Postmodern humanities and social sciences have questioned everything, while at the same time, fuelled by the struggle against the monopoly of a particular race, religion, gender, social class, geographical region, etc. have multiplied the number of truths up to the number of utterances. So it turned out that there is no absolute truth, that everyone has a reality of their own; everyone is right in their way. There is a single step from here to the belief that all claims are entitled to exist, even those that contradict each other, i.e. they are mutually exclusive if we use a term of the Aristotelian logic, which has already been rendered

surplus to requirements. Notions like "post-truth" show today's contempt for the age of truth, which is deemed outlived, crowded out by original expression, by playing with the crowd's emotions, by activism and the intoxication of the awareness that screaming loud enough on social media wins the argument for you.

Even if the scientists prove you wrong, or the court rehabilitates the object of your attack, evil has already been done. In a world without truth, you have had your uncritical following based on the belief that whoever speaks well and loud enough must be in the right as well. This is why, in the 21st century, trust in science competes with belief in superstition and pseudo-spiritual teachings; consumer culture has long crowded out high culture (the latter implies effort and thought), the visual and the sensational find it easier to keep the audience focused than in-depth analysis and even reading as such.

The Internet and social networks provide a platform for everyone to speak without discrimination, including those who have nothing to say or a lot to lie about or deploy hate speech. If there is no absolute truth and everyone is right in their way, we cannot jam the voices of fools, liars and haters until it turns out that their voices are the only ones we hear.

In this world of conspiracy theories, susceptibility to fear and panic, manipulation and populism, a pandemic could provide the jolt we need. When the lives of millions are in jeopardy, and we are looking to scientists – rather than to charlatans – for salvation, we might as well suddenly come to our senses, with the number of vaccine believers outstripping the number of those who believe Elvis is alive.

Another benefit that came with the state of emergency is the accelerated digitalisation of everything we do. Sofia University has had a distance learning platform for 15 years, but so far, it has been used by ten per cent of our faculty. Now we all had to apply it and, after some initial uneasiness, many instructors have found for themselves the tool's benefits. In-person training has the great advantage of personal contact, but digital resources can add a host of new opportunities.

Along the same vein, the need to socially distance and even the interruption of many human activities will give impetus to the development of artificial intelligence. This topic is vast, and a raft of cliff-hangers is coming along with it, yet again there are obvious benefits. Sofia University is doing its best to keep stride with these developments. We are building three centres of excellence in big data and artificial intelligence.

Finally, I would like to mention the coronavirus website run by Sofia University. You can find just about everything in it: the medical aspects, the economic consequences, and even how to sustain our mental health and what cultural events we can visit online. Sofia University's contribution to the anti-crisis effort is also featured: our Biology Faculty tested protective masks; colleagues from the Physics Faculty manufactured safety helmets; the Chemistry and Pharmacy Faculty developed a reliable disinfectant gel; Sofia University's High-Performance Computing Lab at Sofia Tech Park is getting involved in an international project designed to study the way viral protein works, our Cultural Centre offers an online programme, etc.

I wish everyone good health and that we come out wiser of this crisis. We have experienced many crises, and we have survived. We will survive this one too. What matters is to learn something from it.