

A Slow Death by 5G Wireless Technology

Richard Gale and Gary Null PhD

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During the past year, Senate hearings leading up to the roll out of 5G wireless technology have made it quite clear that the race to capture first prize in the Internet of Things has little to do with popular consumer demands for improved internet access. Being called the fourth industrial revolution, the hype is that 5G will provide internet speeds up to one hundred times faster than 4G. Yet aside from the idealized and perhaps hyperbolic benefits of faster internet connections and downloads, 5G is best understood within the context of the US' competitive race against China to establish global wireless dominance. The Obama administration's FCC, under the influence of the telecommunication industry's insider Tom Wheeler, who served as the chair of the agency, launched the Spectrum Frontiers rules to mandate the 5G rollout as a "national priority." Therefore, rather than the fundamental incentive to improve the lives of citizens, more important is 5G's role to reinforce American global economic expansionism and military hegemony. For past presidents, and Trump in particular, economic figures hold all-consuming importance. One estimate claims 5G will bring over \$12 trillion into the global economy, about \$3.5 trillion in the US while providing 22 million new jobs. While 5G surely holds the promise of a huge windfall for the economy, these benefits will be eventually be neutralized by medical and environmental catastrophes.

For the Defense Department, 5G will further harness global military dominance and strengthen the US' lead as the planet's policeman. For the Department of Homeland Security, other federal intelligence agencies, and local law enforcement 5G assures more far-reaching surveillance and policing on the American public. International spying and interference in other nations' internal affairs will also advance exponentially. All the while the telecommunications industry wets its lips over the certain forecasts of rising stock prices and enormous executive compensations.

For the Trump administration, the 5G roll out is imperative. Last December the White House released an announcement that "[I]t is imperative that America be first in fifth-generation (5G) wireless technologies — wireless technologies capable of meeting the high-capacity, low-latency, and high-speed requirements that can unleash innovation broadly across diverse sectors of the economy and the public sector." What we are really looking at is a competitive war the US is waging with China, which has already installed 1.9 million wireless sites. As the US continues to lag behind, it is equally

imperative that 5G opponents keep careful watch of the predictable rise in disease and mental health disorders in China.

5G smart cities will provide the government with total surveillance of society. This was announced by T-Mobile's Chief Technology director Neville Ray at the 2018 Mobile World Congress in Barcelona. Sprint Vice President Ron Marquardt remarked that city government officials will have the capacity to monitor "security issues." The new generation technology, therefore, will offer a boon for the private security industry.

Writing for *The New Yorker*, investigative journalist Sue Halpern describes how the new era of electromagnetic connectivity will increase the risks and severity of cyber attacks. "Ransomware, malware, crypto-jacking, identity theft, and data breaches have become so common that more Americans are afraid of cybercrime than they are of becoming a victim of violent crime," writes Halpern. "Adding more devices to the online universe is destined to create more opportunities for disruption." 5G will not simply connect your alarm clock and television to your mobile unit. It is estimated that millions of new 5G base stations will be installed, 20,000 new satellites orbiting in space, and 200 billion objects with wireless antennas will be transmitting EMF waves by 2020. A few years later it is expected to expand to one trillion electronic objects. 5G technology will be fully integrated into airplanes, automobiles, trains and subway systems. Imagine being in a commercial flight 6 miles above the earth and a major 5G disturbance occurs.

5G servers are already being utilized for spy operations. Halpern reports on the discovery of Huawei wireless servers installed in the African Union's headquarters in Addis Ababa "sending sensitive data back to China every evening." Israel, Russia and the US have already been accused on many occasions for conducting industrial and defense cyber espionage. On all accounts, the threats of cyber warfare will worsen after 5G is functioning fully on a global scale.

In the meantime, Washington and our mainstream media proclaim 5G is perfectly safe and the next great stride for America's utopian progress. Yet it may very well be the trojan horse that brings the US into an electronic dark age.

The overarching question being ignored by Congress concerns 5G's public safety and environmental implications. During a Senate Commerce, Science and Transportation Committee hearing last February, Senator Richard Blumenthal (D-Connecticut) challenged representatives from the telecommunication industry about the technology's health risks. When queried on the industry's commitment to comply with the FDA's insistence to fund "independent research" on EMF's biological effects, Brad Gillen, an executive VP for CTIA - the leading trade association representing the wireless communications industry -- denied there were any industry-funded studies and no

research on 5G's health risks were active. Nor was Steven Berry, President of Competitive Carriers Association, aware of any ongoing research. Blumenthal also sent a formal request to Trump's FCC Secretary requesting information about the scientific evaluation of 5G's risks. The FCC failed to acknowledge his request.

Besides the unbelievable arrogance displayed by the industry's spokespersons, from our perspective it is perhaps worse that Senator Blumenthal, a ranking committee member and highly respected in Congress, failed to present any of the scientific literature confirming 5G's health risks. He could have also subpoenaed the FCC for ignoring his request. He has unlimited resources through the National Academy of Sciences, the National Institutes of Health medical database, the EPA, and FDA yet didn't cite a single study nor invite an independent medical expert to testify what we already know about 5G's and earlier generation's EFM adverse effects on the human body. Dr. Henry Lai, a DNA researcher at the University of Washington could have been called to testify. Prof Lai was quoted in the British Medical Journal for stating "I can name 600 studies showing bioeffects of microwaves off the top of my head." Earlier this year, a petition signed by 26,000 scientists, medical doctors and environmental experts warned the United Nations, the World Health Organization, the EU and Council of Europe and the governments of all nations that "the deployment of 5G constitutes an experiment on humanity and the environment that is defined as a crime under international law."

The Senate hearing was another typical dog and pony show that we have become accustomed to over the decades, with pro-industry shills declaring ignorance of facts, and pleading for a green light while repeating false promises to conduct further research. In the meantime, Congress concedes to industry demands because revenues are being lost and shareholders are becoming impatient. We have heard this all before with the approval of asbestos, Monsanto's glyphosate and genetically modified crops, tobacco and countless pharmaceutical drugs with questionable safety and efficacy records.

May's Senate Judiciary Committee hearing on 5G was even more of a charade. Senators Lindsay Graham and Barbara Feinstein completely avoided the evidence supporting 5G's detrimental effects on human, animal, insect and environmental health. The 5G rollout was a certainty in the mind of every Committee member. Questioning of industry representatives focused solely on national security and cyber threats to the Internet of Things. Nor were the larger public consequences of safety from having all electronic systems controlled by artificial intelligence suddenly being disabled discussed. Clearly national security, protecting the country's military, intelligence and the elite trumps health issues. Since no modern military can realistically win a conventional war, then how likely will the next war between superpowers be waged in the cyber world? This possibility seemed foremost in the minds of our Senators.

The FCC is a fully industry-captured agency. In 1996, President Clinton willingly handed over to the telecommunications industry carte blanche power over state and local governments to install 5G technologies. Clinton's Telecommunications Act (TCA) is a corrupt piece of legislation. It decrees that no health or environmental concern can interfere with telecom installations. In addition, the TCA gives full power to the FCC to regulate telecom EMF's health effects. This ruling was a dangerous joke because the FCC is not a health agency, nor does it employ biomedical experts. The Act also overrides the authority of towns, cities, and county councils to rule against 5G stations and cell tower installments.

Under President Obama, FCC chair Tom Wheeler in no uncertain terms called for the private industry's technology to drive national policy rather than vice versa. In other words, the telecommunications industrial complex has been handed precedence over elected legislators, including Congressional leaders, such as Senator Blumenthal, who voice deep concerns about 5G's human and environmental risks. Wheeler, a principal architect behind the 5G strategy, has never acknowledged that there is an enormous body of medical research concluding EMF threats. He is a product of the same private industrial mindset that has churned out climate change deniers in the fossil fuel corporations and the GMO-risk deniers in Big Agriculture.

Obama's FCC also established a criterion whereby the technology antecedes the warnings voiced by medical, health and environmental institutions and agencies. And under Trump and the chairmanship of Ajit Pai, the FCC's corruption has entered steroidal hyper-drive to destroy net neutrality laws and "dismantle existing consumer protections." Pai, a former Verizon attorney, was originally appointed by Obama and has been accused by the New York Times for running the department in secrecy and failing to make the agency's internal policy decisions public.

It therefore seems certain that Washington, in full collaboration with the telecommunications industry, has been scheming full spectrum dominance of the global wireless connectivity for two and half decades. During this time, the tactic has been to demolish public protections. In return for America's efforts to achieve telecommunication hegemony in order to expand the police state and the nation's imperium, average citizens are handed the leftover crumbs of faster internet speeds. The real victims in the US' cyber chess match with China is the world's population. No animal, bird, insect, plant or human will be able to avoid exposure. 5G will expose us to levels of radiation that are tens to hundreds of times greater than what we face today. And this exposure will be uninterrupted throughout the day, throughout the year and well into the future. It is now just a matter of a short period of time before we will all be saturated with microwave pulses.

Unfortunately, the telecom industry and its contracted scientists remain in complete denial. A plethora of medical and environmental research has accumulated about the health and ecological risks of electromagnetic frequency radiation (EMF) and microwaves. Four hundred new studies on electromagnetic radiation risks have been compiled by public health Professor Joel Moskowitz at the University of California at Berkeley. These studies cover earlier generation technologies, whereas 5G will be far more evasive and less safe. Compared to 4G technology in use today, every 5G base station will contain hundreds of thousands of antennas each aiming laser like microwave beams to all devices.

In a study published in the August 2018 issue of Journal of Medical Imaging and Health Informatics, after an extensive review and analysis of the medical literature researchers concluded that "incidence of cancer cases was remarkably higher among people who resided in 400 meters from mobile antennas, in comparison to those who lived further away. Inhabitants living close to cellular antennas are also at increased risk for developing neuropsychiatric complaints." Under the 5G regime every American in a suburb or city will be living 100 meters or less from an antenna. In 2016, the Europa EM-EMF guideline found "strong evidence that long-term exposure to certain EMFs is a risk factor for diseases such as certain cancers, Alzheimer's disease, and male infertility...Common EHS (electromagnetic hypersensitivity) symptoms include headaches, concentration difficulties, sleep problems, depression, lack of energy, fatigue, and flu-like symptoms."

In our opinion, the 5G rollout is an irresponsible experiment with potential holocaust-like consequences in the long term. Neither the US nor China have ever felt obliged to follow UNESCO's Precautionary Principle to avoid "morally unacceptable harm" when the science is plausible but still uncertain. In the case of 5G, the harm to human life is conclusive, and in the view of Dr. Lennart Hardel, an oncology professor at University Hospital in Orebro, Sweden, it may be in violation of the Nuremberg Code.

Among the many research papers on the adverse effects of electromagnetic radiation, some are especially worrisome:

Nearly 100% of studies employing real mobile phone exposures reveal adverse effects, which include associations to brain tumors, declines in animal populations, and symptoms of un-wellness. (published in BioMed Research International).

Children are at greater risk than adults and absorb more microwave radiation than adults. (Journal of Microscopy and Ultrastructure)

The geometry of a child's head significantly increases mobile phone EMF absorption in the brain, eye, cortex, hippocampus, and hypothalamus. Children have especially high bone marrow conductivity, greatly increasing EMF absorption.(published in the journal Physics in Medicine and Biology)

Simultaneous exposure to lead and RF from mobile phone use was associated with increased ADHD symptom risk.(Published in PLOS One)

Chronic multi-system illness" correlates electromagnetic hypersensitivity to 3 MHz-300 GHz, with headaches, concentration difficulties, sleep problems, depression, lack of energy, fatigue, and flu-like symptoms. (published in Reviews of Environmental Health).

Oxidative stress due to 900 MHz and 1.8 GHz microwave exposure associated with cognitive impairment and inflammation in rat brain (Published in the Indian Journal of Experimental Biology)

Use of laptop computers connected to internet through Wi-Fi decreases human sperm motility and increases sperm DNA fragmentation (published in the journal Fertility and Sterility)

Radiofrequency waves emitted from conventional Wi-Fi devices poses potential effect on both fertility and the integrity of sperm cells. (Published in the Journal of Pediatric Urology)

Population living within 350 meters of an 850 MHz, 1500 watt cell phone tower in Netanya, Israel experienced a 4 fold cancer increase (i.e., carcinoma of the breast, ovary, lung, kidney, bone, and Hodgkin's disease). (published in the International Journal of Cancer Prevention).

In addition there is something largely missing from the 5G debate in the US, whereas some European nations are paying attention to it; that is, existing safety standards for wireless technology are obsolete. This conclusion was arrived at independently by Vienna Medical University in Austria and Carl Blackman at the University of North Carolina, published in the journal Pathophysiology. The problem herein lies in the failures of federal regulatory agencies to be truthful to the scientific evidence rather than show favoritism to the wireless industry's own junk science and commercial interests. Again, private interests profit, and the public is harmed.

Finally, we may consider 5G's vulnerability and dangers to society in the event of a solar storm, such as a massive coronal plasma emission (CPE). Such a threat is very real, as University of Michigan professor of space sciences Justin Kasper told members of the

Senate Committee on Homeland Security last February. Kasper specializes in how solar activity effects society. His fears are that a solar flare similar to the one that engulfed the earth in a "magnetic tsunami" in 1859 could potentially wipe out the country's electrical power grid. Power transformers are massive utilities costing tens of millions of dollars each and generally there are no backups. Therefore, imagine if such a solar storm were to assault a fully installed global 5G wireless network whereupon everything modern culture depends upon is interconnected. Satellite communications will be an essential component of the 5G infrastructure and are defenseless against massive radiation emissions from the sun. Without operative electrical and water utilities, septic systems, gas pumps, air conditioning in summer or heating in winter, for weeks, months and perhaps a year in the event of a massive coronal plasma emission, society as we know it would come to a standstill. Nuclear power plants would likely spiral downward into meltdown. Transportation as we know it would come to a halt. And in the event of a super "magnetic tsunami" chaos could follow.

Therefore, 5G poses far more problems than even its sharpest critics voice. It is not simply a threat to human health and the environment from constant exposure, but the security of the entire international community of nations is in peril. Our Congressional leaders are a national disgrace for failing to side with the public rather than the telecommunications industry. Obviously contaminating all life on the planet is too insignificant of a concern. In fact, 5G holds the possibility in being another tipping point in the sixth extinction.