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Cyberspace vs. the Coronavirus – saving hundreds of millions of lives

It's been about 28 years since I wrote that in the information age, communication replaces transportation. Now as we emerge into the cyber-age, this is being augmented with delivery automation replacing human carriers.

As the Coronavirus or the next emerging disease pops onto the scene, it's worth identifying how the breakthroughs and progress in the cybernetic world enable humanity to adapt our behaviors to save us from pandemics, and while we are doing it, start to address global climate change in a major way.

Isolation as a defense

Isolation to limit community spread is a viable idea, but at this point, because of the Corona-virus characteristics, the delay between infection, the ability to infect others, and outward discernible signs of the virus are such that there are already many people who can infect others and who are in place beyond the boundaries of existing quarantines.

However, even though the virus is likely to be pandemic, slowing its spread by isolation gives time to develop prevention, treatment, and cure. This delay can only reasonably be done by isolation, for a virus that lasts 7 days on hard surfaces and can spread 6 feet from an infected individual.

But how do we isolate people and still have them able to eat, drink, and live their lives? Of course cyberspace is the solution. As a starting point, I have worked almost entirely live online remote for many years, and most white collar workers in advanced countries can do so most of the time. So for that population, work from home. For those who cannot, most common workplaces that are not involved in serving other people have relatively small numbers of people leveraged with a great deal of automation. Limited contact, proper protective gear, and strong process control can largely eliminate this spread.

Schools, retail locations, restaurants, and other hospitality industries are the dominant other places for the spread of disease. Home schooling and remote schooling when parents are also at home can largely address these issues for education. Hospitality will take a big hit, but can be substantially addressed by limiting shared spaces and again by prophylactic means. It will certainly hurt this industry. Restaurants can move toward delivery, and while they will lose a lot of business, many can survive through this approach, if we get delivery working properly.

Automated delivery and sterilization of delivered goods and packaging then become a critical problem. I am pretty certain that this can be addressed by wipe downs of packaging and/or other handling approaches. Of course delivery never involved person to person connections and automated warehousing and sanitary practices can largely eliminate spread through this vector.

This capability has already been enabled and can expand to service the vast majority of people in advanced countries. This will buy us all time, and will operate for a period.

Buy time for what?

The first anti-viral attempt is now being tested for Coronavirus. And even if this one fails, the fundamental breakthroughs in medical research and development of late have changed the world to the point where it is likely we will find defenses that work better and better over the next few months, quarters, and years.

Without the cybernetic and informational capabilities of medical research we have today, and with the global travel situation as it has been till now, pandemic would be almost certain in relatively short order. We will likely see it soon in the case of Coronavirus. But if we can slow it by a few months, we will know enough more to be able to save a significant number of people who might otherwise die. And every 3 months we delay pandemic, we buy another set of potential treatments, cures, and protective approaches.

And during that time, what else happens?

As we develop more and better techniques for cleaning packages, assuring safety of other delivered goods, and as we spend more time of workers at home instead of in a shared space, other things will change as well. For example:

- Work from home will become so common and deployment of resources to support this so in place, that the travel to and from shared spaces for many workers will become less popular, common, and necessary. As we adapt to this, we will get better at it.

- As people recover the few hours a day they spend commuting, the cost of driving or taking other transportation, the cost of coffee and lunch away from home instead of at home, etc. they will come to enjoy more of their lives and want to continue it.

- A side effect will also be a dramatic reduction in pollution, energy use, fossil fuel consumption, and other pollution generators. This will help to mitigate global climate change, but more importantly, get people into thinking differently about these issues.

- The packaging revolution will have to also take place to remove the extent of unneeded packaging, and especially plastics in packaging, if we are to gain many of the potential benefits, but part of the overall program will likely be the limitation of new materials such as packaging because of the limitations on supply likely to result from the economic changes. Thus we may start to require recycling of packaging and packaging that is inherently returnable with the next delivery. After all, the delivery vehicles have to come back anyway… why not use them to reuse and recycle?

- 3d printing will also have a boon so that many things you would otherwise have delivered can be made at home, or made closer to the delivery point, with the material recycles for the next use. Of course this will take a bit longer, but it is a seemingly obvious long-term effect.

Conclusions

I don't want to keep prognosticating on this or guessing at the future, but I think these aspects of the emerging cyber world are likely to emerge, and very soon. Having said this, I am going to be driving to the RSA conference tomorrow early in the morning, where I will no doubt pick up a few diseases from the crowds and interactions I have had year after year from that experience. Hopefully, I will not pick up the Coronavirus while there, but eventually, ...