WEBINARS

May 12, 2020 1900-2000 EDT (UTC-4)

The Impacts of the COVID-19 Outbreak on Cybersecurity

The Impacts of the COVID-19 Outbreak on Cybersecurity: The Good, the Bad, and the Ugly

Dr. Boris Saavedra

Associate Professor

William J. Perry Center
for Hemispheric Defense Studies

National Defense University

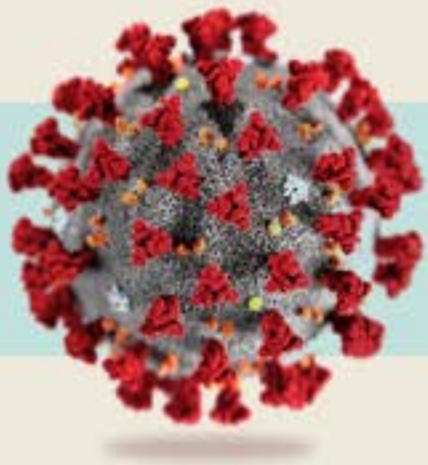Washington, DC 20593-0001

saavedrab@ndu.edu

202-685-2213

FAX 202-685-4675

Agenda

- Current global technological context
- Pandemic and work from home
- Mobile security
- Case study **COVID-19**
- Technology recommendations
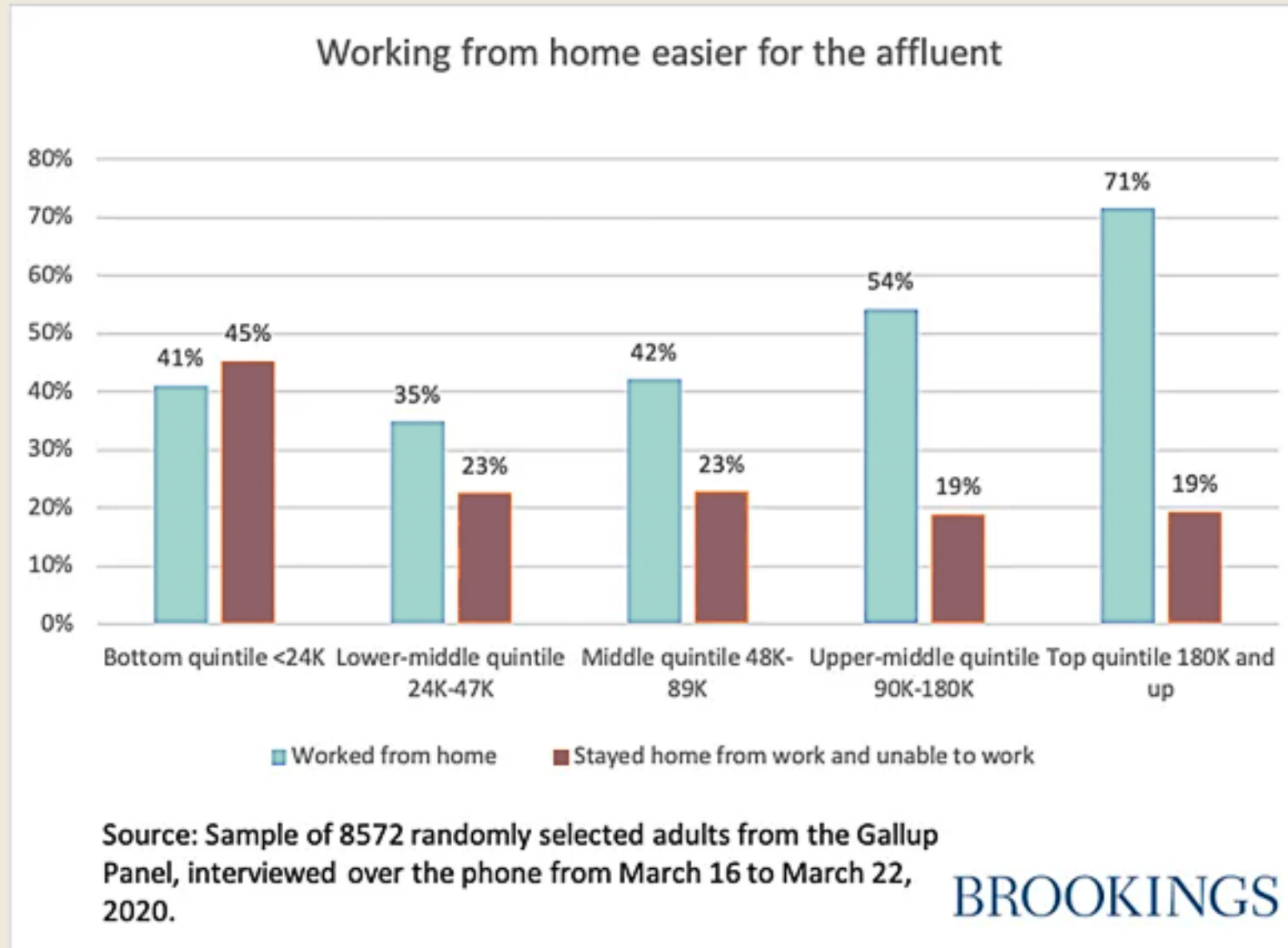- Cybersecurity terminology
- Conclusions

Objective

Analyze the impact and consequences of **COVID-19**, and provide strategic recommendations for cyberspace

Current Global Technological Context

- Accelerated exponential technology ⟶ disruptive innovation
- The conversion of these new accelerated technologies
  - Artificial intelligence
  - Virtual and augmented reality
  - 3D printing
  - Blockchain
  - Material science and nanotechnology
  - Biotechnology

COVID-19 Physical Reality

Working from home easier for the affluent

Source: Sample of 8572 randomly selected adults from the Gallup Panel, interviewed over the phone from March 16 to March 22, 2020.

BROOKINGS

Virtual Reality in COVID-19 Pandemic

- **COVID-19** has unlocked the potential of the Cloud, the Internet, and the IoT with the shift to telework *https://www.statista.com/statistics/1106893/covid-19-verizon-network-usage-increase-2020/*

Pros:

- Employees tend to prefer working from home
- It reduces emissions and office costs
- It helps people balance work and family roles

Cons:

- Managing a telecommuting staff can be difficult
- Professional isolation can have negative effects on well-being and career development
- Long-term effects on productivity in a scaled-up system are uncertain

https://www.brookings.edu/blog/up-front/2020/04/06/telecommuting-will-likely-continue-long-after-the-pandemic/

Pandemic and Work from Home

- Criminals are seeking to capitalize on the widespread panic—and they are succeeding

- The fastest growing type of cybercrime

- Awareness and knowledge of phishing scams

- Employees from organizations of all types and sizes have minimal cybersecurity education and resources, and are failing at cybersecurity

- Organizations are required to ensure that any endpoint technology an employee is using is fully protected

COVID-19 Impact on Mobile Security

Cell phones and tablets are mini-computers, and should be protected as such.
Mobile security issues have surged with increased reliance on telework
- **84%** of public/private organizations depend on mobiles
- **43%** of companies sacrificed security
- **39%** of companies suffered a security breach
- **87%** concerned that a mobile security breach could have a lasting impact
- **81%** of companies agree their data privacy record will be a key brand differentiator in the future

Consequences of mobile-related breaches
- **59%** Downtime
- **56%** Data Loss
- **46%** Breach of other devices
- **37%** Damage to reputation
- **29%** Regulatory penalties
- **19%** Loss of business

Case Study COVID-19

Effects of Coronavirus outbreak on digital behavior

- Cybercriminals are exploiting people's fear and uncertainty
- Stealing confidential data, disrupting digital operations, and making money from ransomware attacks
- Significant impact on user privacy and computer security
- Increased use of cyberspace in Latin America and the Caribbean due to the effects of COVID-19

Cyberattacks exploiting coronavirus fears

- Malware
- Spam emails
- Fake COVID-19 websites

Case Study COVID-19

Recommendations to stay safe online and avoid cyber threats and scams during the pandemic

- Test commercial websites before making payments
- Be vigilant about spam emails
- Install effective anti-malware software
- Be vigilant of social engineering and maintain cyber awareness
- Avoid opening suspicious attachments
- Avoid clicking on questionable web addresses and URLs
- Back up your data
- Verify information sources
- Increase digital readiness
- Increase security measures—especially on your mobile phone—and have a data recovery plan

Technological Recommendations to Apply

Cloud-based teleworking systems like Commercial Virtual Remote Environment, Microsoft Teams, Slack, Atlassian, and Zoom with the following capabilities:

- Chat
- Video
- Virtual meetings
- Screen sharing
- File sharing
- Storage

https://breakingdefense.com/2020/04/covid-19-dod-remote-access-capacity-soars-tenfold/

https://www.cbinsights.com/research/remote-work-from-home-market-map/?utm_source=CB+Insights+Newsletter&utm_campaign=da4ff5e8a0-newsletter_general_Sat_20200418&utm_medium=email&utm_term=0_9dc0513989-da4ff5e8a0-91510577

Cell Phone Tracking Could Help Stem the Spread of Coronavirus

- Surveillance capitalism ⟶ data is abused and exploited.

- Authorities and general public will have to weigh the value of privacy against the possibility of personal data collection that could save millions of lives.

- Testing people is painful and slow, personal interviews provide incomplete information.

- Cell phone app in China shows when and where it's safe to go out.

- Mathematical simulation of how "instantaneous digital contact tracing" would influence the spread of the virus.

Functional and Administrative Recommendations

- **To create a Cybersecurity Task Force that includes—but is not limited to—CIOs from public and private institutions, security and defense forces, and health, economy, energy, transportation, and justice**

- **Criteria to be applied:**

  1. Approved initiatives must be subject to a "culture of compliance" policy and must be implemented fully and on time.

  2. The "cyber discipline" tasks assigned to the institution should have a designated entity to monitor and report on progress.

  3. "Cyber-awareness" training should be instituted with constant compliance and monitored so users who haven't completed the required training can be identified.

Current and Short-Term Impacts

- *Artificial intelligence, automation, and 5G telecommunications* could be accelerated even more—particularly in the area of biotechnology
- *China's current stimulus measures* would primarily benefit companies with accelerated and convergent exponential technologies
- *Accelerated exponential technology*, any technology that doubles in power while dropping in price on a regular basis
- *Converging technology* is the process in which all these formerly independent waves of exponential accelerating technologies are beginning to converge with other independent waves of exponentially accelerating technology
- *Disruptive innovation:* it happen when a new innovation creates a new market and washes away an existing one, we use the term "disruptive innovation to describe it

Terminology

- *Attack:* A general term covering any deliberate action toward a system or data that is unauthorized. This may be as simple as attempting to access it without permission.

- *Compromise:* A successful attack that results in a system's defenses being rendered ineffective. This could involve data loss, downtime, other systems being affected, or no detrimental effects at all. It could be malicious or accidental.

- *Data breach:* An incident that results in the confirmed disclosure—not just potential exposure—of data to an unauthorized party.

- *Exploit:* A definition, often in the form of a script or code, of a method to successfully leverage one or more vulnerabilities to access a system without proper authorization.

Terminology

- *Incident:* This covers any form of security event regardless of whether or not it is malicious or successful. This might be anything from the logging of a failed authentication attempt to a successful compromise and data breach. It also includes non-malicious events such as the loss of a device.

- *Risk:* A measure of the likelihood of a threat, an organization's vulnerability to said event, and the scale of the potential damage.

- *Threat:* Any danger that could impact the security of systems, privacy, or data. This can apply to a technique like phishing or an actor like organized crime.

- *Vulnerability:* A weakness that could be exploited. It may be known or unknown to the manufacturer, developer, owner or the world.

Conclusions

- **COVID-19** has intensified our digital life, which has become a tool to maintain social contact.

- **COVID-19** has changed the human interaction of society at global, national, community, family, and individual levels.

- Cybercriminals are cashing in on human desperation, deceiving internet users, and distributing harmful software.

- Convergent accelerated technology has increased its process, particularly in biotechnology.

- The pandemic has caused a disruptive transformation that can increase innovation and reduce threats that endanger life on the planet.

Recommended Bibliography

- Tomas L. Friedman, Thank you for being late. Farrar, Straus and Giroux New York, 2016

- Peter H. Diamandis & Steven Kotler, The future is faster than you think. Simon & Schuster. New York, 2020

- Mobile Security Index, Verizon 2020 Report. Located at: https://enterprise.verizon.com/resources/reports/2020-msi-report.pdf

- CODVI 19: DoD Remote access Capacity soars tenfold https://breakingdefense.com/2020/04/covid-19-dod-remote-access-capacity-soars-tenfold

- Telecommuting will likely continue long after the pandemic. https://www.brookings.edu/blog/up-front/2020/04/06/telecommuting-will-likely-continue-long-after-the-pandemic/

- Brookings COVID-19. available in https://www.brookings.edu/topic/coronavirus-covid19/

- Latin American Advisor. Available in: https://www.thedialogue.org/analysis/what-role-for-china-in-lacs-covid-19-recovery/

www.redtracgov.edu.jm

OUTLINE...

► **COVID-19, situation overview (Region)**
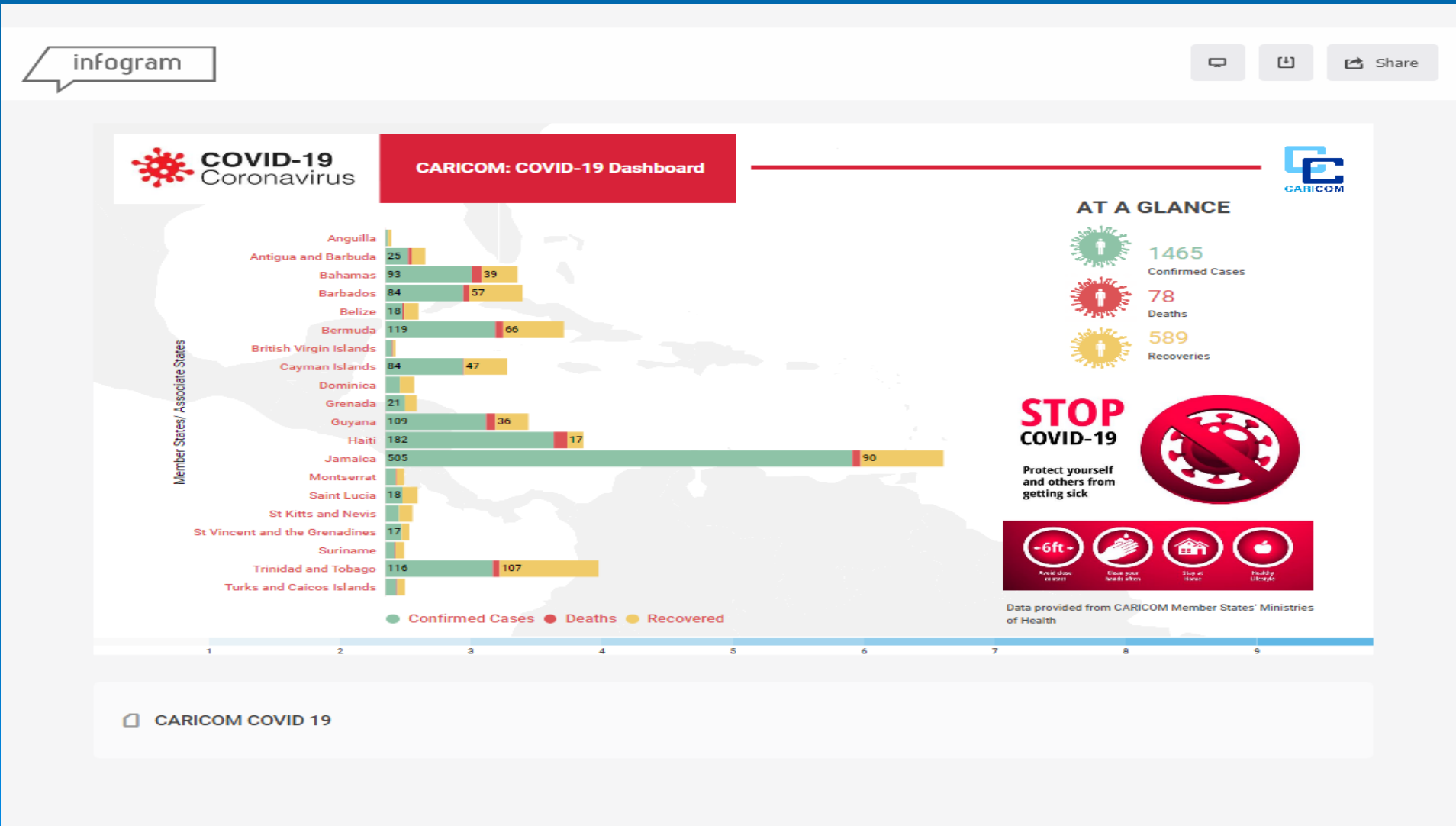
► **Brief look:**

    The Good!

             The Bad!

                      The Ugly!

► **Concluding thoughts**

Caribbean Public Health Agency
https://carpha.org/

THE GOOD…

▶ **Embrace of technology**
▶ **Acceleration of technology**
   (Banks, Govt Institutions, Businesses)

▶ **Work from home practices**

▶ **Philantrophy is alive and well!!**

COVID shield in the works – Jamaican engineer pitches 3D reusable protection

Jamaica Gleaner

CEO Wallen Bryan, demonstrates a 3D printed face shield made locally by his technology company PreeLabs. The company has also generated a 'proof of concept' for an ICU Ventilator but "still has some way to go in developing the electronic components."

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"Working from home easier for the affluent."

- Small farmers

- Barbers/Hairdressers

- Taxi drivers

- Hustlers and unregulated economy

- Et al

Challenges to working from home

DEMANDS ON TECHNOLOGY

- Parents working on-line

- Children in on-line classes:
  – Tertiary
  – Secondary
  – Primary
  – Early childhood/Pre-school

LIMITATIONS IN TECHNOLOGY

- Limited internet penetration

- Networks stretched to limits

- Bandwidth issues

- Limitation, available devices

- Competing on-line schedules

Think…

Think!.....

THE BAD…

Criminals are capitalizing on the fears, anxieties, uncertainties of persons globally

Hackers 'Paradise'
– On-line 'catch' is now much larger!
– They have the Time, Motive, Opportunity!

► **Hacking of virtual meeting platforms**
   ZOOM-Bombing!

► **Increased cases of ATM/ABM fraud**

► **Proliferation of FAKE NEWS**
► **Proliferation of CONSPIRACY THEORIES**
   DOOM Scrolling!

South Africa Parliament video call hacked with pornography…

…the hackers also hurled racial and sexual insults at the chairperson, Thandi Modise, the Speaker of the National Assembly.

Jamaica Gleaner

The practice of endlessly scrolling through social media and other information channels reading depressing news about the state of the world.

DOOM SCROLLING!!

The Ugly…

► **Discrimination against persons suspected of COVID-19 infection**

► **The resurgence of anti-vaccine activists *(Anti-Vaxxers)***

► **The linking of 5G Networks with COVID-19**

How anti-vaccine activists are using COVID-19 to boost their movement

Kaiser Health News, 28 April, 2020

Targeting 5G!

Conspiracy theories linking 5G mobile networks and COVID-19 are fueling arson attacks on cell towers….

CONCLUDING THOUGHTS…

● **COVID-19 has intensified our digital life** (But, moving ahead of <u>security protocols!</u>)

● **Cybercriminals ramped up their activities**

● **Managing and Safeguarding Our Privacy!**

    - Privacy Policy
    - Cookie Policy

    - Privacy Settings

    - Manage our consent

    - Education: awareness, greater emphasis on security, increase robustness of systems!

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"The Risks –
Know Them, Avoid Them!"
— *Dr. Erin Bromage*

https://www.erinbromage.com/post/the-risks-know-them-avoid-them

Recommended Reading!!