<u>**Hacking Humans**</u>

Carl Lochstampfor Jr.

Department of Cybersecurity, Old Dominion University,

CYSE 200T: Cybersecurity, Technology, and Society, Professor Chris Brown

February 22, 2025

<u>Assignment:</u>

Using the following article material, write a summary and take away from it.

<u>Source:</u>

[Hacking Humans: Protecting Our DNA from Cybercriminals](#)

Summary

Hacking humans is a national concern for governments, an economic concern for organizations, and a privacy concern for the public. The problem with securing our data is not only our financial and basic medical information but also our DNA. The storage of our DNA for the advancement of medical research and the use of stored DNA to help solve overdue criminal cold cases are noble, just, and valuable causes. However, considering the many significant data breaches over the past decade, the public must ask itself: "Do the pros of learning more about ourselves, improving our health, and securing specific areas of society outweigh the cons like hackers stealing my genetic code or organizations misusing it for their selfish and unethical gains?" The public must also consider the following question: "If organizations are currently having difficulty securing our data and preventing unauthorized access from insider and outsider threats, how can we fully or partially trust them to do the same with our DNA data?"

DNA as the Ultimate Personal Identification Information (PII)

Rizkallah lists several essential questions for the public to consider when digitizing DNA data:

1. Is digitizing or consumerizing our DNA a good, useful, or safe?
2. Is digitalizing human DNA an innocent novelty from one's curiosity worth the risk of having our stored genetic code breached and stolen from unauthorized threat actors?
3. Is it okay for a potential or current employer to access your DNA and review it to determine whether you are a good fit for the company?
4. Where do we stop? What boundaries do we place when considering the privacy and security implications? (2018)

Hackers seek to steal our DNA data and sell it on the dark web for large amounts of money (Battle, 2023). While your Social Security Number, credit card, or bank account number is replaceable, there is no replacement for your DNA—though it takes a lot of extra effort to do so while restructuring your life after even the smallest form of identity theft. Your DNA is permanent and irreplaceable: hackers may use that stolen information to hijack your identity today and forevermore. The uses of your DNA are limited in today's modern economy; however, with technological innovations on the rise, it is only a matter of time before there will be more profitable uses for our DNA, some probably resembling our favorite Science Fiction films of the past like *Blade Runner (1982, 2049), The Island (2005)*, and the *Resident Evil Series (2002 – Present)*.

Lastly, there is a concern about those with legal access and permission misusing our DNA data. How would it make you feel that your current or future employers will have access to your DNA data—like running a credit and background check on you—to determine if you are a good fit for the company culture and the role you are applying for? That resembles a form of preselection the Nazis used towards advancing their "pure race" in their eugenics programs during World War II.

Conclusion

We must ask ourselves, "Where do we draw the line on what is considered oversharing our personal details? And where do we stop and consider not just the privacy implications but the security implications?" (Rizkallah, 2018, p. 3). Despite promises for greater security and convenience, organizations continue to fail at securing our data. We must remain diligent when storing ALL our data, including our DNA. We must hold those responsible to the highest forms of excellence and accountability, or we will suffer and suffer severe consequences in this lifetime or the next.

References

Battle, P. (2023, October 16). *Hackers could use your stolen 23andMe DNA data as a weapon*. Retrieved from TheStreet: https://www.thestreet.com/technology/hackers-could-use-your-stolen-dna-data-as-a-weapon

Chin, K. (2024, December 24). *Biggest Data Breaches in US History (Updated 2025)*. Retrieved from UpGuard: https://www.upguard.com/blog/biggest-data-breaches-us

Rizkallah, J. (2018, November 2019). *Hacking Humans: Protecting Our DNA From Cybercriminals*. Retrieved from Forbes: https://www.forbes.com/councils/forbestechcouncil/2018/11/29/hacking-humans-protecting-our-dna-from-cybercriminals/

Wikipedia. (2025, February 16). *History of the Internet*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/History_of_the_Internet