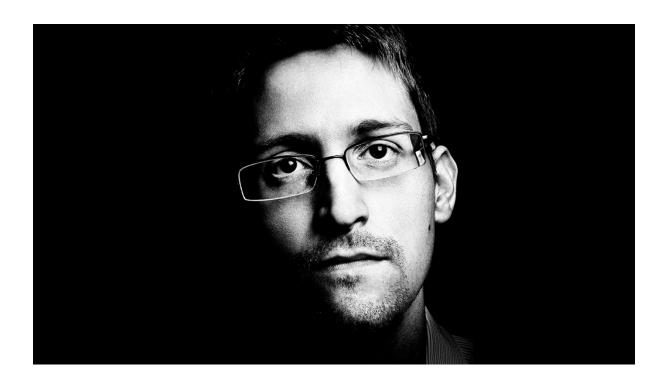
"Arguing that you don't care about privacy because you have nothing to hide is no different than saying you don't care about free speech because you have nothing to say"

(Snowden, 2019)



Biography of Edward Snowden

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Introduction

Edward Snowden was born on June 21st, 1983 in Elizabeth City, North Carolina. Both of Snowden's parents worked for the US government. His mother was a clerk for the Department of Justice and his father worked with the Coast Guard. From an early age, Snowden took an interest in problem-solving and computers. He spent copious amounts of time browsing the Internet in the dial-up era, learning computer programming from early internet forums and 'hacker zines'. As a young teenager, Snowden managed to access classified information from the Los Alamos Natural Laboratory's website by 'dirwalking' and contacted them about their vulnerabilities, resulting in him being offered a job there once he turned eighteen.

Snowden dropped out of high school in his Sophomore year after falling ill with infectious mononucleosis and began attending classes at Anne Arundel Community College in Maryland. He completed a GED but never received a formal college degree. During this time, he also freelanced as a web-designer with a friend he had met at college.

In the aftermath of 9/11, fuelled with a new-found sense of patriotism, Snowden enlisted in the army. However, only a few months into the rigorous training programme, he suffered stress fractures in both legs and was sent home. It was then that Snowden decided to use his natural talent and skill with technology to serve his country and, after undergoing the stringent background check and eventually receiving top-level clearance, began working with the National Security Agency (NSA) as an employee and subcontractor of the CIA.

Work

By nature of the line of work Snowden was involved in, he held many different roles and was stationed in many different locations including Switzerland, Japan and Hawaii during his brief seven-year career as a government agent for the Intelligence Community. While in Japan, much of his work centred around the development of cloud technology. Snowden created a program named "Epic Shelter" for the NSA which greatly improved upon data deduplication and had the effect of expanding storage space and extending the capabilities of holding data to longer than ever before. Seeing the direct and indirect consequences of his work, Snowden began to grow increasingly concerned with the ethical merit of gathering of data on

a colossal scale without the knowledge or consent of the citizens it was surveilling all around the world. Upon realising his "Epic Shelter" program was assisting in providing data to enable lethal drone strikes, Snowden grew completely disillusioned with the ethics of what he had played a crucial role in creating.

This disillusionment ultimately culminated in Snowden becoming a controversial whistle-blower in June of 2013, when he released to the press a vast collection of files describing NSA practices that he believed to be invasive and disturbing. These actions resulted in a charge of espionage and theft of government property, causing him to seek political refuge in Russia.

Snowden released a memoir, titled 'Permanent Record' on September 17th, 2019. On the same day of its release, the US Department of Justice filed a civil lawsuit against him and the book's publishers for alleged violations of NDA agreements with the CIA and NSA. He remains in exile with his wife, Lindsay Mills, in Moscow to this day.

Impact

Regardless of your level of agreement with Snowden's actions, they have undeniably had a massive impact globally. The term "The Snowden Effect" was coined to describe the "direct and indirect gains in public knowledge from the cascade of events and further reporting that followed Snowden's leaks of classified information about the surveillance state in the US" (Rosen, 2013).

The digital revolution that led to an explosion in internet and mobile phone use over the last two decades combined with the fear of terrorism incited by the 9/11 attacks, led to the expansion of mass surveillance on an unprecedented scale. The digital footprint we leave behind enables the NSA or other government agencies and private companies to construct a detailed profile of a person and anyone who is associated with them. Before Snowden's documents exposing the sweeping surveillance programs of the US and other governments, the general public were either completely unaware or unaware of the extent to which their personal data was being collected and monitored. Snowden's revelations led to increased salience of privacy issues and increased scrutiny of the laws underpinning mass surveillance. They began a conversation that was long overdue about our right to privacy online which has

since led to the introduction of regulation across the world providing privacy protection, such as GDPR in Europe (Beaumont, 2015).

The Snowden Effect has also had an impact on software engineering and the technology industry as a whole. Public opposition to privacy invasion meant that many were wary of software and hardware products that could be handing their personal data over to third parties. Tech companies have had to start incorporating privacy protection into their products/services in order to meet the demands of consumers and to maintain competitive parity. One example of a company's response to the "Snowden effect" is Apple with their introduction of new encryption methods and non-compliance with the NSA and law enforcement requests for user data from iOS 8 onwards (Sanger and Chen, 2014).

Overall, Snowden's courageous whistleblowing has had, a profound and far-reaching impact on individuals, companies and governments all around the world. Six years on, data privacy remains a highly disputed topic, especially as capabilities for data collection and analysis expand to include artificial intelligence algorithms and become increasingly commonplace as part of marketing strategies in the private sector. Although moves have been made to improve oversight, there is still room for more discussion on legislative reform and greater use of encryption to protect privacy. However, without Snowden's revelations bringing his concerns to public attention, this conversation may never have begun in the first place.

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