## Edward Snowden: The man who exposed the electronic surveillance of everyone by US intelligence

Kevin Reed 12 October 2019

In the final chapter of his memoir *Permanent Record*, Edward Snowden issues a warning to his readers. He writes, "[I]t wouldn't take much for an interested government to find out that you've been reading this book. At the very least, it wouldn't take much to find out that you have it, whether you downloaded it illegally or bought a hard copy online or purchased it at a brick-and-mortar-store with a credit card."

Prior to Edward Snowden's 2013 exposure of a secret US mass surveillance program, the idea that the government was electronically eavesdropping on the entire population—such as what books they are reading or what subjects they are searching for online—was feared and even suspected.

This suspicion was aided by intelligence service whistleblowers who came before Snowden, such as Mark Klein (2006), Thomas Drake (2011) and William Binney (2012), as well as some Hollywood movies such as *Enemy of the State*(1998) starring Will Smith and Gene Hackman, and the Jason Bourne series based on the novels of Robert Ludlum and starring Matt Damon (beginning in 2002).

However, the exposures by Snowden provided the public for the first time with extensive documentary proof of mass electronic surveillance and violation of democratic rights by the US intelligence state. As Snowden writes in the preface to his book, the National Security Agency (NSA) and Central Intelligence Agency (CIA) had built a vast system with a hegemonic goal: "to collect all the world's digital communications, store them for ages and search through them at will."

The exact number of NSA documents that Edward Snowden disclosed to the media and the number that he exfiltrated from US intelligence are both unknown. Some estimates put the former at approximately 10,000 and the latter at 1.7 million. The documents included classified reports, email messages, memos, planning documents, promotional and training PowerPoint presentations.

Among the most devastating revelations from Snowden's disclosures is the existence of the downstream surveillance method known as PRISM. Snowden describes PRISM as a tool used "to routinely collect data from Microsoft, Yahoo!, Google, Facebook, Paltalk, YouTube, Skype, AOL and Apple, including email, photos, video, and audio chats, Webbrowsing content, search engine queries, and all other data stored on their clouds, transforming the companies into witting coconspirators."

He goes on to describe upstream collection as "arguably even more invasive. It enabled the routine capturing of data directly from private sector Internet infrastructure—the switches and routers that shunt Internet traffic worldwide, via satellites in orbit and the high capacity fiber-optic cables that run under the ocean." Snowden explains, in some detail, the technologies behind the upstream data collection:

"As I came to realize, these tools are the most invasive elements of the NSA's mass surveillance system, if only because they're closest to the

user—that is, the closest to the person being surveilled. Imagine yourself sitting at a computer, about to visit a website. You open a Web browser, type in a URL, and hit Enter. The URL is, in effect, a request, and this request goes out in search of its destination server. Somewhere in the midst of its travels, however, before your request gets to that server, it will have to pass through TURBULENCE, one of the NSA's most powerful weapons.

"Specifically, your request passes through a few black servers stacked on top of one another, together about the size of a four-shelf bookcase. These are installed in special rooms at major private telecommunications buildings throughout allied countries, as well as in US embassies and US military bases, and contain two critical tools. The first, TURMOIL, handles "passive collection," making a copy of the data coming through. The second, TURBINE, is in charge of "active collection"—that is, actively tampering with the users ...

"If TURMOIL flags your traffic as suspicious, it tips it over to TURBINE, which diverts your request to the NSA's servers. There, algorithms decide which of the agency's exploits—malware programs—to use against you. This choice is based on the type of website you're trying to visit as much as your computer's software and Internet connection. These chosen exploits are sent back to TURBINE (by programs of the QUANTUM suite, if you're wondering), which injects them into the traffic channel and delivers them to you along with whatever website you requested. ... it all happens in less than 686 milliseconds. Completely unbeknownst to you.

"Once the exploits are on your computer, the NSA can access not just your metadata, but your data as well. Your entire digital life now belongs to them."

In warning his readers about these programs, Snowden anticipates the US government's reaction to his book. Upon the September 17 release of *Permanent Record*, the Justice Department filed a motion against both Snowden and his publisher Macmillan seeking to block any proceeds from the book ever getting to the whistleblower.

The absurd US legal claim is that Snowden violated his nondisclosure agreement with the CIA and NSA by failing to submit his manuscript to his former employers for review before publishing. The reality is that the DOJ and Trump administration intend to intimidate anyone else who might consider going public with evidence of crimes committed by US imperialism.

Also contained in Snowden's warning is a clear message: the mass surveillance he exposed and shared with the *Guardian* and the *Washington Post* just over six years ago is not only continuing, it is expanding. Although his revelations have resulted in improvements in the technology of electronic communications—such as widespread adoption of data encryption methods—Snowden acknowledges that government spying

continues.

It is noteworthy that among the nonstop references to an unnamed CIA "whistleblower" behind the unfolding impeachment proceedings against President Trump over his phone call with Ukraine's leader Volodymyr Zelensky, Democratic and Republican politicians and, corporate news programs, have made scarcely any reference to the example of Edward Snowden. Although he has received numerous international whistleblower awards, such as the Ridenhour Prize for Truth-Telling and the Carl von Ossietzky Medal, Snowden has been living "somewhere in Moscow" for the past six years and faces three US charges including violating the Espionage Act of 1917.

Among the most important parts of the book are where Snowden describes how he came to learn about and understand the scope and scale of the NSA's criminal surveillance apparatus. In the chapter called "Tokyo," the city where he went to work for the NSA in 2009 as an "employee," first of Perot Systems and then Dell, after Perot Systems was acquired by the personal computer maker, he explains, "As in the CIA, this contractor status was all just formality and cover, and I only ever worked in an NSA facility."

He writes, "The material that I disseminated to journalists in 2013 documented such an array of abuses by the NSA, accomplished through such a diversity of technological capabilities, that no one agent in the daily discharge of their responsibilities was ever in the position to know about all of them—not even a systems administrator. To find out about even a fraction of the malfeasance, you had to go searching. And to go searching, you had to know that it existed."

Snowden says in his first days with the NSA he was only "slightly more knowledgeable about its practices than the rest of the world." After reading in July 2009 a document called *Unclassified Report on the President's Surveillance Program* about George W. Bush-era warrantless wiretapping, he had questions, and this suspicion "sent me searching for the classified version of the report."

In Tokyo, Snowden had been assigned the responsibility of developing a backup and storage document management system that provided the NSA with "a complete, automated and constantly updating copy of all of the agency's most important material." It was due to this unique responsibility that Snowden became exposed to a wide range of top secret information.

When the classified version of the report on Bush's surveillance program came to Snowden's attention by mistake, before moving to "scrub the document from the system" per IT procedures, he decided to examine the file to "confirm" that it should be deleted. "Usually, I'd take just the briefest glance at the thing. But this time, as soon as I opened the document and read the title, I knew I'd be reading it all the way through."

Snowden goes on, "Here was everything that was missing from the unclassified version. ... a complete accounting of the NSA's most secret surveillance programs, and the agency directives and Department of Justice policies that had been used to subvert American law and contravene the US Constitution. ... The document was so deeply classified that anybody who had access to it who wasn't a sysadmin would be immediately identifiable. And the activities it outlined were so deeply criminal that no government would even allow it to be released unredacted."

In another chapter called "The Tunnel," Snowden tells about working in 2012 at the NSA facility located in a former airplane factory located under a pineapple field on the island of Oahu, Hawaii. It was here that he would later copy the NSA documents to a micro SD card, smuggle them out in his Rubik's Cube and share them with the news media. Snowden explains, "my active searching out of NSA abuses began not with my copying of documents, but with the reading of them. ... I had to understand the system before I could decide what, if anything, to do about it."

In Permanent Record, Snowden provides his personal history through

his life in exile in Russia since 2013. Readers get to know who Edward Snowden is as a person and they learn how it was that a 29-year-old intelligence contractor living a comfortable life in Hawaii decided to take on the world's most powerful military-intelligence establishment. As he writes, "This book is about what led up to that decision, the moral and ethical principles that informed it, and how they came to be—which means it's also about my life."

Snowden's life story is important as personal biography and it is also significant in terms of what it says about the generation that has grown up in the era of the personal computer, video games, the Internet and the World Wide Web. A broader social and political phenomenon lies behind the clarity, determination, courage and values expressed by the individual Edward Snowden.

As he recounts his days with the CIA and NSA, Snowden reveals many aspects of the criminal operations of US intelligence on a global scale. He discusses the role of IT specialists like himself in the transition of the intelligence agencies from the predominance of older generation HUMINT (human intelligence) to the modern era of SIGINT (signals intelligence) or what later became known as "cyber-intelligence." The espionage operations of US imperialism were becoming more and more dependent upon the skills and knowledge of Snowden's generation.

Due to his facility with computer hardware, operating systems, software, networking and data, Snowden rose rapidly within the intelligence apparatus and eventually obtained access to documents and information available to only a handful of deep state officials with the highest security clearance. As he began reading through these documents, Snowden grew increasingly alarmed about the meaning of the massive data collection that was taking place behind the backs of the public.

Along with others—such as WikiLeaks founder and editor Julian Assange, who is in a London prison fighting threat of extradition to the US, and whistleblower and former US Army soldier Chelsea Manning, who is in jail in Virginia for refusing to testify against Assange—Snowden is part of the growing political opposition within the working class internationally to the crisis and crimes of American imperialism.

While corporate media references to the so-called Millennials (those born between 1980 and 1994) is often focused on consumer buying preferences or affinity for digital gadgets, the political experiences of this generation are reviewed, recorded and explained in *Permanent Record*. Snowden deserves credit for forthrightly and honestly recounting how a relatively apolitical 22-year-old passed through a series of bitter political lessons that transformed his outlook.

Edward Joseph Snowden was born in Elizabeth City, North Carolina in 1983. His family moved to Fort Meade, Maryland—the home of the NSA—while he was in grade school. His maternal grandfather was an FBI official, his father an officer in the Coast Guard, and his mother a clerk at the US District Court for Maryland.

After the events of September 11, 2001, Edward decided to enlist in the US Army—against the wishes of his parents. Like many, Snowden bought into the fraudulent "war on terror" campaign announced by the administration of George W. Bush and backed by both the Democrats and Republicans in Congress as they launched the invasion of Afghanistan less than a month after the terror attacks.

In a chapter entitled "9/12," Snowden writes, "The greatest regret of my life was my reflexive, unquestioning support of that decision [the US going to war after 9/11]. ... I accepted all the claims retailed by the media as facts, and I repeated them as if I were being paid for it. ... The sharpest part of the humiliation comes from acknowledging how easy this transformation was, and how readily I welcomed it." Along with these regrets came alternating bouts of anger, reading, disgust and thinking.

Snowden also reviews his experience—along with that of his girlfriend Lindsay Mills—in supporting the candidacy of Democrat Barack Obama for president in 2008. He writes, "The fact that President Obama, once in

office, refused to call for a full congressional investigation [of Bush-era NSA spying on the public] was the first sign, to me at least, that the new president—for whom Lindsay had enthusiastically campaigned—intended to move forward without a proper reckoning with the past. As his administration rebranded and recertified PSP (President's Surveillance

Program)-related programs, Lindsay's hope in him, as well as my own,

would prove more and more misplaced."

Snowden's memoir is also something of a handbook. As he explains the forms of the most common government electronic surveillance methods, he then goes over in layman's terms the readily-available techniques for concealing IP addresses, text messaging with end-to-end encryption, strong encryption techniques to protect the contents of data storage drives and tools for uploading documents securely and anonymously to journalists.

In *Permanent Record*, Snowden comes across as a very intelligent and politically knowledgeable whistleblower. He was careful and calculating in gathering the evidence of US government criminality. He was deliberate and cunning in his delivery of this evidence to the press. He provides a convincing and well-reasoned explanation for why he acted selflessly to expose to the public the secret surveillance programs of the CIA and NSA and, at the same time, identify himself publicly as the man who did it. He solidly grounds his decision-making in a commitment to democratic and constitutionally protected rights.

However, in acknowledging his important strengths, it is also possible and necessary to look critically at the political views articulated by Edward Snowden and point out his errors and weaknesses. Among the serious fallacies in Snowden's outlook is his portrayal of the emergence of the secret mass surveillance state following the events of September 11, 2001 as a well-intentioned response gone awry.

He writes, "After 9/11, the IC was racked with guilt for failing to protect America, for letting the most devastating and destructive attack since Pearl Harbor occur on its watch. ... The doors to the most secretive intelligence agencies were flung wide open to young technologists like myself. And the geek inherited the earth."

Aside from the fact that "geeks" like Snowden are employees of and contractors for the intelligence state, the electronic technology infrastructure being marshaled for spying on the public—as well as the use of other high-tech tools for war making such as unmanned drones—is driven by the historic crisis and decline of American imperialism. The increasing resort to war as well as the attacks on democratic rights both at home and abroad are rooted in the loss by American capitalism of its postwar global economic and political hegemony.

While Snowden makes passing references to American "imperialism" and "capitalism," his grasp of these socioeconomic concepts lack depth and it is clear that he has a limited historical understanding of their relationship to the class character of society. Operating without the theoretical understanding of class society, Snowden is mistaken that democratic rights can be defended without a political struggle by the vast majority—the working class—against the ruling class and its state apparatus.

Instead, he believes that the "error" of the secret surveillance of the entire population can be corrected by appeals to the very forces who created it. As he writes, "I realized that coming forward and disclosing to journalists the extent of my country's abuses wouldn't be advocating for anything radical, like the destruction of the government, or even of the IC. It would be a return to the pursuit of the government's, and the IC's, stated goals." These are indeed dangerous illusions.

In spite of these shortcomings, Edward Snowden has written a compelling memoir that deserves the widest possible readership. The story of his life, his career with US intelligence, his exposure of US government criminality and his courage and self-sacrifice—including the fact that he has been living for the past six years in an "undisclosed location" in Moscow and is constantly looking over his shoulder—is one that must be

told.



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