

The Hacker Perspective

by Matt "magrr" Grabara

I never thought of myself as a hacker. All I do is live my life and enjoy it whenever possible. At some point, I just realized a bunch of people refer to my ways as hacking. I found this embarrassing for two reasons: First, often mentioned on the pages of *2600*, I was worried people saw hackers as equal to criminals and terrorists; Second, I never considered myself sufficiently talented to refer to myself as a hacker.

It all started with my mom. My family had a comfortable middle - if not *upper* middle - class life. For my mom, however, it was never enough. In her view, we did not earn enough, our standard of living was not high enough, and other people, including myself, my dad, and probably even our cats, were never good enough for her.

All of us had to take blame for things not being as perfect as my mom would have liked. At the time, I did not understand why me and my dad had to suffer from emotional blackmail and "silent days," which were anything but silent. During those, my mom would abuse us verbally, yet still refuse to actually say what was really bothering her.

When I was told I did something wrong, I often did not understand what it was. I never got an answer other than "you should know." Trying to discuss it with others, including other family members, was a treason punishable with "silent days." Everyone was supposedly plotting against us. This keeps coming up even now, 20 years later.

As you can imagine, these were some tricky waters to navigate. Despite being a seven-year-old with a deliberately limited exposure to the outside world, it still felt wrong. This pushed me to try various ways of improving the mood at home. This included presenting unfortunate facts in more favorable ways, omitting them altogether, complimenting and flattering my mom on every right occasion, and keeping quiet rather than criticizing. My childhood attempts at social engineering did not prevent the next outburst. Furthermore, once found manipulating facts, two "silent weeks" were a normal punishment.

Computers, due to my parents' jobs at school and university, were always present in my life. Unusually for Poland of the late 90s, each of my parents had their own PC at home. My mom had a NEC with an amber monitor, running a 486 CPU, 16 MB hard drive, and MS-DOS 5.0. I enjoyed sitting between her and the back of the chair and observing her manipulating text-based user interface apps, swapping 3.5" and 5.25"

floppy disks and printing documents on a dot matrix printer.

Together with computers, we always had some form of Internet connection. During the dial-up days, our modem did not support pulse dialing enforced by the telecom. I subsequently became the master of my dad's dial-up ceremony. Every evening, my dad went to his Windows 95 machine to check his mail and read news. Before he sat down, I was asked to pick up the phone and dial 0202122. Once I heard the response on the other end, I was observing the screen and hung up when the connection with the computer was established. There was something magical about listening to the machine-generated sounds exchanging information across the world.

At the age of six, I was given my first very own PC, running Windows 3.11. Weirdly, digging into settings and productivity apps excited me most, despite not knowing what they did and not understanding messages they produced. I eventually broke the Windows installation and no one was able to fix it. I quickly got the hang of Norton Commander and kept playing games instead.

At some point, I got a new PC with 16 GB hard drive, CD-ROM, and Windows 98 SE. Around that time, computers in homes were already common and stores exploded with Windows games and educational software. I immersed myself in interactive encyclopedias and maps. I imagined myself traveling to faraway places, going to outer space, and visiting the world's top museums.

Since my early days at school, I was always seen as *that* computer guy and an overall weird kid. I was reading computer magazines available at the time and trying all the software that came with them, occasionally bricking and then rebuilding my machine as a result. At the end of my middle school, I had dozens of these.

For my eighth birthday, I asked for a book: *Turbo Pascal & Delphi for Kids Aged 8-88* by Hans-Georg Schumann. It came with a CD containing full versions of Turbo Pascal and Delphi. From that moment, nothing made me more excited than building my own apps.

Since then, I envisaged an information society in which every piece of knowledge was available to everyone at an instant. I believed machines would replace humans at their menial tasks, so that we could focus on Greater Things - building a better world, expanding into space. A decade before this notion became part of the mainstream

debate, I was obviously seen as a complete nerd and no one felt brave enough to seriously talk to me. I felt much more comfortable talking to the adults in the field. For my schoolmates, I was speaking tongues.

Despite my mom's best attempts, I never had a competitive attitude. I never had an intention to be better than others at anything. I was simply interested in an in-depth understanding of things I cared about. To prove to her that I was good enough, however, I signed up for the knowledge show on TV. Selecting computer science as my subject in the final round was an unintentional winning strategy. The other contestants did not dare to steal my questions for extra points. I ended up winning a laptop and recognition in my hometown. No one had any idea how to deal with it. I also learned that there were even more competitive parents than mine.

The entry-level Acer, still worth \$1000 at the time, was my treasure. It came with an AMD Sempron CPU and Windows XP Home. At that time, people mostly had business notebooks owned by their employers. The liberty of having one of my own and keeping the desktop as a backup meant endless tinkering opportunities. I was installing various Linux distributions in single-, dual-, and multiple-boot with various Windows versions, MS-DOS, and FreeDOS, which had just been released. I tried to understand how the built-in Norton Ghost recovery partition worked, just to delete it later as it took a significant chunk of the 32GB hard drive. I tried to build my own window manager on top of FreeDOS, genuinely believing I could do it better than the big players. Same went for my attempt to build a voice assistant based on the instructions from *CHIP Magazine*,¹ hoping it would actually be intelligent.

Around that time, my school received a new and much bigger computer lab with Windows XP Pro machines. Without an Active Directory controller, we had individual restricted local accounts. My account was not restricted for long though. Having done some research, I quickly figured out the hidden default administrator account, unlocked and accessible with an empty password. I used it to grant admin rights to my own user account, but never actually used these privileges. One day, it was finally discovered and teachers reacted with respect rather than anger. This cannot be said about the guy sitting next to me who took the idea one step further - he also restricted the admin account used by teachers.

Two years later, my parents were briefly teaching at a weekend vocational school in another city. For the first time in my life, I was home alone all day long. The catch: I could not leave the flat. Our front door came with a burglar-proof lock. If you turned the key twice when locking, it was impossible to unlock from the inside. I found a spare set of keys at home, but it was useless. I thought asking my parents not to lock me up would be rather arduous, given my

mom's overprotective attitude. Instead, next time I heard them leaving in the morning, I quickly ran towards the door. After I heard the first turn of the key, I unlocked the door and when the key turned for the second time, the door was still locked from the outside but I could unlock and leave.

I did not get away with it the second time I tinkered with the school's lab. This time, it was also a brand new lab at my middle school, years seven through nine. It came with an Active Directory controller. I was curious whether a privilege escalation similar to the one I exploited previously could be found. The vulnerability was sitting between the keyboard and the chair, namely the lab teacher. I asked to be shown something on his workstation, where he had a minimized and unlocked Remote Desktop session with the server. When the teacher went to the back room, I restored it and noticed an open Active Directory Users and Computers. I quickly created myself a domain admin account. It did not take me more than five minutes to get there, despite having no prior exposure to the Windows Server environment.

My lack of a plan and the desire to impress my classmates by granting everyone admin rights resulted in me getting caught. I learned a lot about RDP and helped my teacher secure the school server, but still had my grade lowered. My class was not allowed entry to the lab for the whole semester and I experienced some bullying. My mom was threatened with legal action. My dad, shortly after this incident, went on a long-planned business trip. My mom spent that fortnight drinking. This is when I realized my mom's odd outrages and behavior were linked to her alcohol addiction.

Even though it did not seem like it on the outside, my personal outcome of this incident was overwhelmingly positive. I learned about healthy relationships: the right person will support you in becoming your best friend but not be imposing. I found true friends with whom I am still in touch. I came to understand my mom's behavior better and found more patience and resilience which helped me cope with it.

Coping but still overwhelmed, I started plotting an escape plan. The goal: start an independent life on the best possible terms. My cousin in another city was just taking his final International Baccalaureate exams and had an offer from a foreign university. I decided this was a feasible path I might be able to get parental approval (and money) for. It took another two years to get there and, as a result, I finished my high school one year later.

My IB years gave me unprecedented freedom. I had to move to another city and stay in the dorm. The dorm staff made sure everyone stayed in overnight, so while wild teenage parties were out of the question, I still could roam around and go out with friends without having to feel guilty about it.

Until now, I had often been frowned upon for asking too many questions. Now, for the first time, I met people sharing my curiosity. Together with my dorm roommate and despite the lack of computer courses in our curriculum, we were discovering cryptocurrencies, open-source intelligence, and breaking e-book DRMs to read them on our preferred devices. We both applied and got rejected from MIT. I kept criticizing my other friend's endless "great" business plans. Our physics teacher's passionate classes on radio communication stuck in my head and proved handy ten years later when I got into amateur radio.

Finally having a support network, I also became more assertive towards my immediate family. I dropped out of piano classes. I had been forced to take them because my mom was not allowed to play this instrument as a child. Most people warned me against quitting them. Ten years on, I only wished I had done it sooner.

I ended up with a bachelor's degree in economics in the Netherlands. I tried to catch the growing data science wave and thought I was good enough to do two degrees at the same time: economics and econometrics. Despite failing the criteria for passing my first year, I was granted an exemption I did not ask for, continued the dual program, failing the econometric courses. I fell out with my parents, who kept telling me all I needed to do was study harder or come back.

The recent coronavirus pandemic brought the concept of brain fog to the mainstream. At that time, however, I was not able to explain my inability to focus. The less interesting the subject, the more likely the brain fog took control of me. I started drinking coffee, which I never liked much, but it helped a little.

I eventually found the courage to drop out of econometrics. It was a huge relief. Courses in the economics program were more interesting and it was easier to find part-time jobs, thus gaining financial independence. After being a paperboy, I ended up doing some front-end development for a company serving Europe's biggest businesses and teaching information and communications technology (ICT) at my university. I became fully convinced I needed to pursue programming

professionally.

My brain fogs and frequent bad dreams - to my girlfriend's discomfort - made me seek professional help. That was when I learned about ADHD, but due to limited health insurance, decided not to get a full diagnosis. I did not need it anyway. Applying ADHD coping strategies was sufficient for me to take back control.

After the roller coaster of my undergraduate studies, I took a gap year and went to Vancouver, British Columbia. I found a job at a managed services provider and did various network administration tasks. I was managing the same kind of directory controllers like the one I took over during my middle school years. This time, I did my best to prevent others from doing so.

My job involved no programming, so I decided to quit after eight months. I took a two month rail journey across Canada, likely the only truly carefree backpacking in my life. Back in Europe, I got my postgraduate degree in computer science and found a job as a developer in a friendly, open-minded environment.

Even though I was already reading about cybersecurity for quite a long time, I always thought of a hacker as a person with a certain technical skillset. While in Canada, I discovered 2600 during a casual bookstore browse. Having become a subscriber since, it occurred to me that hacking is not about technical skillsets but a curious mindset. While skills are important, they do not make you a hacker. Developing them to quench your curiosity - rather than get a raise - does. Unlike hackers in movies, I do not think most of us know how to break encryption off the top of our heads. All that unites us is our drive to address challenges in the most efficient way.

web.archive.org/web/20070320210751/http://www.chip.pl/articles/archiwum/n/articlear_52994.html

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HACKER PERSPECTIVE SUBMISSIONS ARE NOW OPEN!!

As promised, we've reopened the entry process for the "Hacker Perspective" column. If we print your piece, we'll pay you \$500!

The column should be around 2500 words and answer such questions as: What is a hacker? How did you become one? What experiences and adventures did you live through? What message can you give to other aspiring hackers? These questions are just our suggestions - feel free to answer any others that you feel are important in the world of hackers.

Send your submissions to articles@2600.com (with "Hacker Perspective" in the subject) or to our mailing address at 2600, PO Box 99, Middle Island, NY 11953 USA.

Submissions only open every few years so don't delay!

(And be aware that it can take months or even years to select columns due to the large number that come in whenever we do this, so please try not to change your email address - or give us a backup means of contacting you.)