

THE  
ENIGMA  
FACTOR

BREAKFIELD AND BURKEY

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PROLOGUE, MONTHS EARLIER

## THE RULES ALWAYS FAVOR THOSE WILLING TO RISK GETTING HURT

**H**er watchful eyes followed the rapid movements across the bright flickering monitor as each piece of the puzzle moved to its assigned location. Her subdued smile increased as each piece was transmitted. She knew that Q on the other side would have them captured and reassembled seconds after they arrived at their destination. This was the last of the updates for the communications interceptor routines.

She always kept her word and honored her family responsibilities. Complex communications were her specialty and her adaptations kept the family business ahead of the world governments. Even her day job of creating programs with the U.S. telecommunications leader was not at this level due to the bureaucracy they operated under. Over the years she had tried to enlighten them, but it was a slow road of acceptance for them. This was her part-time outlet of creativity which helped her maintain balance.

Pulling her eyes away she returned to her primary work screen, verifying that the recompiling of those programs was almost finished. The documentation for her departmental changes was already completed, with updates to her team members also issued. Her ability to compartmentalize the two efforts, both for good causes, spoke to her genius. She was slightly distracted by the vibration of her cell phone which she retrieved from her pocket with the same efficient fluid motion.

“Hello, Julianne here.”

“Dobry Wieczór!”

“English please, Father. Good evening to you too.”

“Of course, make it harder for me. Q is telling me you are sending the final versions as we speak.”

“Yes, they are finished, Father. I need to focus on an upcoming project for my work over the next few months, so requests need to go elsewhere.”

“Why not quit that job and come home. I would like to spend some time with you as well as get to know your son. How is he doing with his studies? Is he ready for our family now?”

“He is doing well and working hard. He is far more brilliant than any of us. But he knows nothing of the family business as I’ve repeatedly told you. Not yet. I want him to have a chance to make his choices rather than the family. My son, my choice. You promised me, Father, and you have never broken a promise to me.”

“Yes you’re right. We continue to watch out for you and him, but I want to know him before I die.”

“You will next year. I will bring him over and we will explain things to him together. Just as we agreed. You will be so proud of him. I have only taught him to be the best, to be cautious, and to trust little in a world of bits and bytes. Keep in mind he may choose not to be a part of the business. He is his own man.”

“Speaking of careful, have you heard any more from the Sergei character, or has he finally stopped trying to recruit you?”

“That prick! He has not come around for several months. He doesn’t think I can help him after the crap programs I provided to him. He actually called me here at work and told me I couldn’t program my way out of a paper bag. I believe I threw him way off track. You are still monitoring his activities?”

“Yes, of course we are, along with several others. He is up to something we know. He will eventually defeat himself.”

“Good. As it should be for garbage such as him. Is the rest of the family good? Any new marriages or births I need to know about?”

“No changes. We are all sad that none of your son’s generation have fallen in love or found a way to make the next generation. And you, my darling girl, do

you need anything? You know I would gladly pay for your efforts on our behalf for these programs.”

“I make a good living, Father. I have never asked for family money. The efforts are out of love, as you well know, and the belief that you help make the world better. I need to finish up here and get home to my son. Dobranoc, Father.”

“Dobranoc, Daughter. We will talk soon.”

Julianne finished wrapping up her efforts and closed down her work machine and her laptop. The laptop she stored in her briefcase, as it was always kept within reach. Turning off the lights as she stepped out and locked her office door, she wasn’t surprised to see the others had already left. Putting on her jacket she took the elevator to the lobby and smiled as she thought of getting home and having the weekend to relax. Maybe she and Jacob could take in one of the Off-Broadway shows. They both deserved a little fun.

It was dark and the street deserted, though damp from heavy dew. Setting her gait for the twenty minute walk home, she felt herself relaxing as her legs stretched out after sitting at her desk most of the afternoon. Her thoughts wandered to the preparation of supper as she crossed the street. As usual she was intently focused on reaching the destination and not her immediate surroundings.

Over the years she’d learned to focus all her intellectual power on single issues or problems, to the exclusion of all else. This ability to focus her mind had served her well over the years. Tonight it betrayed her. She didn’t even notice the car starting up its engine then aggressively revving the engine. The car lunged out with its high beams focused directly toward her face which disoriented and blinded her causing her to freeze in mid stride. All those lessons delivered to her son while he was growing up about looking both ways and being aware of your surroundings completely failed to register in her paralyzed state.

Just like the spell cast by an experienced poacher with a high intensity search light designed to blind and pause a deer, so too did the car’s high beams render her immobile. The sound of the squealing tires was not due to a concerned driver trying to stop in time, but rather a predator accelerating the machine to lethal speed. In that all too brief window of time that she froze, all possibilities

of her future life had only one outcome. The car viciously struck her, killing her as it rolled over her body, crushing her briefcase as well. Her last thought was of Jacob.

The predator brought the car to an abrupt stop and studied the scene for any signs of life in the rear view mirror. No amount of medical treatment would change the life pooling onto the pavement from the brutal crushing. Satisfied with a job done right the first time, the predator laughed like a mad-man. The car sped away with no pause and a driver with no remorse.

The investigating detective could find no evidence to change the finality of a random hit and run. She was interred with a quiet service attended by her priest, her son and his friend.

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## PRESENT DAY

### CHAPTER 1

**LIFE HAS INFINITE POSSIBILITIES,  
BUT HUMAN BEINGS ARE  
HOPELESSLY PREDICTABLE.**

“I’ve got you now,” Jacob rumbled at his screen. “And you’re mine.”

The blue white glow of his flickering screen provided the final elements of the solution he’d stalked for days, or rather nights. His instincts were right on target. He’d found what he could now see was a bigger problem than the hacker chat rooms had thought. He was damn lucky to have found this one.

Jacob methodically reviewed all his traces to verify that his tests were valid. The door had been wide open. He muttered to himself about the vulnerability of Open Source and applying it without thorough testing. Yep, he had the proof. Good. He had found it for himself, but felt moral in giving back so that others could avoid a pitfall. Jacob did not like seeing others taken for a ride because they foolishly over trusted. Humans were so vulnerable.

Shifting windows on his screen he worked through the code corrections which he had begun ten nights ago. Satisfied with his recommended modifications, he completed two more extensive tests, just to be sure. Not only did he demand programs that worked correctly every time when his name was on the line, he insisted on them being better than perfect. Nothing could replace the overall sense of accomplishment for Jacob.

As he waited for his program changes to compile, his thoughts drifted to his Mom. She had taught him that if it was worth doing, then excellence was the goal.

“There could be lives at stake,” she’d always said.

He never could get why she always made it a life and death thing, but as he had grown older he’d guessed it was for emphasis. It was just her way, opinionated and firm, as well as how Granny had raised her. Boy, he missed their discussions. Both of the ladies that had raised him were fine programmers and communications experts in their own time. His Mom’s recent passing pressed into his thoughts. He pushed away the anger that came with that thought. After four months, he had only started to be able to concentrate again. He couldn’t go there now. This find he had made was too important.

The recompiled fix was retested and he wrote up the required narrative. Perhaps a little more formal than some other posts, but his name, at least his cyber name, was on it. No one was left to take pride in his name or his ability but himself. He could be true to himself. Mom and Granny would be proud.

He was a hacker. By definition that could be stated as a person who breaks into computers and computer networks for profit, in protest, or because they are motivated by the challenge. Today the subculture was actually part of the open community. Plus there was the whole White Hat versus Black Hat controversy. Jacob considered himself a White Hat, part of the group of security experts who referred to Black Hats, or computer criminals, as crackers rather than hackers.

His machine chirped. He paused and opened the chat window.

*Buzz: ping!*  
*JAM: hey, Buzz. Whatcha need*  
*Buzz: Hey man, need some help with some code. I believe I know what is needed, but I will take your opinion*  
*JAM: Little busy here Buzz, really don't have time.*  
*Buzz: Loser! What's the matter, not up for real work? So much for being a bud*  
*JAM: Ok, ok send it to me, I'll make some time*  
*Buzz: Good man. Need by early morning, see ya!*  
*JAM: Where is my P.O. for this work? ☺*  
*Buzz: lol*

“Why do I let Buzz suck me in every time?” Jacob muttered.

Going back to the task at hand, he finished his commentary, and then posted it and the corrected program to the web site. Maybe someone would notice his penchant for detail. Today, at almost thirty, he had a good job with a leading information security company, PT, Inc., as a security penetration-tester, helping companies avoid information compromise. Some would say he was too focused on work.

Laughing to himself, he jumped over to his email account window. He found the note and attachment from Buzz. Great, Buzz wanted him to review the coding routine for interest calculations in a new program for his bank. Reading the requirements, picking through the code Buzz included, Jacob saw error after error.

“His effort here is so junior,” Jacob muttered. “Buzz tries, but he is so out of his league. Granted we were college buddies, but this is really bad.”

Jacob had been lucky with his scholarship to MIT, whereas Buzz basically bought his degree.

“Why is it he seems to simply try to copy old errors or problems and then fails to work through them to make them right?” Jacob mused. “Ok, more help just like during school. Geez, I can’t believe he used that old crap.” Opening the chat window he pinged back.

*JAM: Buzz, did you even try man*  
*Buzz: What do you mean, that is great code, just different style from you*  
*JAM: Did you copy and paste from somewhere else, rather than code to the requirements? There is a trap statement in here that comes from the open source I fixed two months ago for you, it is wrong here*  
*Buzz: no man, maybe you opened the wrong file.*  
*JAM: I will fix it, I will also add a file for routines you should look out for in other code. Could cost your bank a fortune.*  
*Buzz: Thanks bud, drinks/food Friday!*

Jacob continued for the next few hours correcting Buzz’s code and redoing portions to meet the requirements. Too bad, he hadn’t landed the job Buzz had. The money was so good. Course, Buzz also had the family influence. It hadn’t

hurt that Mr. Buswald was connected in the bank and financially set. Buzz simply did not have the head for finance like his dad. He was educated, liked the idea of being a great programmer, but in all reality he was only good enough for basic programming. Actually he might be better running a team, if he wasn't such a pain to be around. He still did the high school goofy tricks and cutting comments that tended to alienate people. Ah well, Buzz did help him when his Mom was killed. Jacob owed him.

Giving himself a pep talk, Jacob thought he had nothing to complain about. He liked pen-testing considering it one of the best jobs he'd had so far. Jacob liked the thought of trying to get in the head of a Black Hat who beat down the paths to breach the security. He liked encryption and security aspects of computer programming that his Mom had introduced him to, as well as logical system overlaps. He firmly believed in a layered defense approach to data access and securing resources of a company.

Jacob was so into systems and the various overlapping systems at play. If he could understand the system at play he could make it work for himself. The age of information is really heady when you get into the bits and bytes like he was. Just stopping bad guys from wreaking havoc made him feel like a cyber-cowboy.

He checked the requirements one more time, going down the list to make certain each portion was correct to the specifications. Good, one more testing run and trace verification and it would be done. He would send it to Buzz with notes on process that would likely be ignored.

As the test was running he again drifted to thoughts of Mom and her dedication to him and giving him knowledge. Like her logical approach to systems and her belief that there existed systems on top of systems as technology achievements continued to evolve.

It had been just the three of them for much of his life. After Granny passed, then the two of them remained in this house. Such a pair of focused and secretive ladies he doubted he would ever meet again. He really had little idea about his European family roots.

The story he'd been told was that Granny came from Poland as a young woman at the tail end of WWII. She had said she'd brought Mom along to be born in America. That was her proudest achievement, she'd always said. Of

course she said it in Polish, German, French or English depending on which language she wanted him to work on. As such, the household had always been multi-lingual, reading, speaking and writing. It had helped him though and he missed the conversations with them. Programming though was always in English, always with process, and always focused. Like mother like daughter. Where Granny had left off training him, Mom continued until her last breath. But, the family, their involvement in the war, and other relatives were totally unknown to him. Jacob had tried some Googling, but he simply didn't have enough information to go on.

Jacob had been told that Granny was born in Poland in 1925 but came to America when she discovered she was pregnant after believing she would never be a Mom. Too many years of working, programming, struggling, prior to coming to New York, he suspected caused the silence on her past. There were no details about her early life and definitely no mention of family. Granny was strict in wanting her daughter Julianne and then Jacob to learn the right way of doing things. She was delighted with Jacob's ability to let fingers fly across the keyboard of his earliest computer. She taught him a lot about working through various programs. She had learned from the ground up, so her teachings were invaluable. Mostly she loved him and let him find his own way from within a grounded framework.

Mom was like a younger carbon copy. Mom taught him even more as her work took her to different levels in systems design and security aspects. She too never spoke of his father, but indicated that Jacob was a product of an intense love affair during an extended trip to Europe in her twenties. Granny had sent her to a special learning symposium, not to fall in love, she'd often mentioned as she hugged her daughter. Life was saving money and a relatively frugal efficient lifestyle, which Jacob continued to subscribe to. College for Jacob had been the focus for a long time with no loan debt. The one bump in the road was during his college application where his birth certificate only listed Julianne. The discussion on that was a wall of silence that never collapsed despite repeated queries.

The testing completed as he glanced at the screen. He zipped it up and sent the files to Buzz confirming the Friday payment of drinks and dinner. Actually he was looking forward to a night out on Friday. He rarely went out, feeling that

dating was a bit expensive until he could provide for a lady. Plus no one had really caught his eye other than a mild appreciation for pretty intelligent women. Besides, now Buzz would buy and he could continue to save.

Jacob crashed into a dreamless sleep. He awoke a scant four hours later to an unforgiving alarm. Jacob dashed through the shower. As he shaved off the morning shadow, he had no problem looking at himself in the mirror. He had helped Buzz last night or this morning rather. Chuckling, he imagined the look on Buzz's face likened to biting into a lemon, when he reviewed the code and commentary. Maybe Buzz would learn a bit, Jacob thought, with the final comb of his thick dark hair.

He grabbed a fast breakfast of orange juice and Cocoa Puffs, typical bachelor fare. Stuffing a couple of apples and a water bottle in his backpack, he loaded up his work PC and locked up the townhouse. The morning was crisp and clear for New York in the summer time. So he jumped on his bike, adjusted his backpack and began the 20 minute pedaling effort to work.

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## CHAPTER 2

# WE DO NOT LOOK FOR FAME! FAME IS ONLY VANITY. OUTCOME IS THE GOAL

Jacob arrived at work with enough time to grab some tea at the Starbucks in the lobby of his work building. Julie behind the counter had been here every work day since he began this job two plus years ago. She was a pretty girl who always had a nice smile for her customers. Jacob thought she was sweet, even if she was a little too perky for him at times. She always recognized him, though truth told, he essentially took her for granted.

“Morning Jacob, do you want your usual tea?” Julie asked, throwing him a smile that should have dazzled him, but which he totally missed.

She gave him the daily once over. She liked his six feet plus, athletic build, strong determined jaw, thick dark hair, and often fantasized about the possibilities. What she wouldn't give to run her fingers through his hair and see if it felt as rich as it looked. He was nice enough even though he was oblivious to her flirting.

“Ah well!” she sighed.

“Hey Julie, yep that would be great, thanks.” Jacob smiled at her, but mentally went back to organizing his morning. He knew he had to finish up the Citybankers review project and review Tom's pen-test for World Bank. A team meeting was also in his morning plan.