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## **THE MAGENTA EQUATIONS**

*By J Alan Erwine*

Equations danced around Jeng Fitztog in every shade of the visible spectrum, from red to violet. He knew what every color meant with only a glance, but he didn't take the time to glance at most of the formulas. Instead, his attention was drawn to the magenta shaded equations.

A brief flick of his index finger brought a formula into closer view, showing Jeng the patient had abnormal neurotransmitter levels; specifically acetylcholine three times lower than what would normally be expected. But how that tied in with infarct dementia, Jeng couldn't even begin to fathom.

A soft chiming brought Jeng's attention away from the equation, and it quickly receded back into the dancing display with all of the other mathematical representations. None of them made sense.

Another chime brought Jeng's attention completely back to the real world. He sighed before signaling the display to close itself. All of the equations briefly turned white before they faded away.

Jeng stood up from the small throw pillow he'd been sitting on and tried to adapt his eyes and his mind to reality once again. Shaking his head, he stretched muscles that had been bound up for hours while he'd been staring at the equations.

The chime sounded yet again.

“Enter,” Jeng called with more anger than he'd intended.

Alvin Wentmonker scurried through the door in the way that only annoying aides of little men with lots of power could.

“Forgive the intrusion, Doctor,” Alvin said. He was a small man with a protruding gut, something that was very rare anymore. He had graying hair that looked like it hadn't seen a comb in days, and a nervous smile that matched his twitching hands.

“Forgive the intrusion, Doctor,” Alvin said yet again, “But the Board was wondering if you'd made any progress.”

Jeng flicked his wrist and a small robot rolled out of the corner with a glass of water on its tray. Jeng took the glass and continued to study Alvin. He knew that the inspection was probably driving the little man crazy, but he really didn't care, and he couldn't really know. Reading people in person was a lot harder than learning about them from mathematical representations. Still, there was a part of him that hoped he was making the man uncomfortable.

He took a long drink before he frowned at Alvin. “I could make a lot more progress if I wasn't being interrupted in my work so often.”

“But the Board,” Alvin said with the awe of a man who had no idea what the Board really was, even though he worked for it. “The Board needs to know everything that's going on, and

they say that your progress reports have been most unsatisfactory of late.”

Jeng turned away from Alvin and walked over to a wall. A brief touch of an unseen button and a window appeared, showing the grimy skyline of New York. Jeng took a few moments to watch several boats traveling down the streets. He knew there were real people down in those boats, but he didn't know who or what they were. People were nothing more than a sum of their experiences, and the individual didn't matter to him. However, he did think that there was something about the individuals he'd been studying that did matter, but it wasn't them; it was their equations.

“I really think I was about to make a major breakthrough before you interrupted me.”

“I'm sorry, sir, but the Board...”

“Yes, yes, yes, the Board. Tell them I should have some preliminary information within a week.”

“But, sir,” Alvin said, sounding like he might break into tears, or at least that's what Jeng imagined his quantification would have looked like. “If the media gets their hands on this information, it could be the end of the company.”

Jeng didn't say anything. There wasn't anything he could say because the little terrified man had a point. So far they'd managed to keep the stories about the madness out of the media, but if they ever found out, it would be the end of more than just the company. It would be the ruin of most of the economy of the world, but that wouldn't stop the media from releasing the information if they got their hands on it.

He had to find a reason. Why were so many spacers going mad? There had to be an

explanation, but if he couldn't find it, there might never be another trip to space, and then there'd be no chance for humanity to survive.

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At first, no one had thought anything of it. A few spacers had gone mad, but stress can do that, and there was certainly a lot of stress in space travel. The discovery that there really was something similar to hyperspace had brought a rush to get into space, and with the uncertainty of what was out there, it shouldn't have been a surprise that there would be a few crazies.

However, space travel had become almost routine. There were almost a dozen launches a day from Earth, and even more from Luna, Mars, and the other colonies. Therefore, they should have seen a decrease in the madness, but that wasn't what Jeng saw when he looked at the equations.

If anything, more people were going insane after going into space. At first it had just been pilots and navigators, but now that more and more people were heading out, even some of the passengers were beginning to show signs of madness.

Jeng had gone through the psychological profile equations of almost every case in history trying to prove what the Board believed; that the madness had a common biological cause, but that wasn't what Jeng found.

Certainly there were similarities in some of the cases, but that would be true of any malady, but the more Jeng looked at this one, there seemed to be no biological or genetic pointers for this illness.

Magenta equations again flashed around Jeng as he sat in the middle of his empty study

trying to find an answer. An equation filled with biological predispositions pulsed in front of him, but the silently shivering magenta equation next to it showed entirely different predispositions.

Jeng shook his head, and all of the equations raced away from him, rejoining the other colored formulas that slowly circled the room. The more Jeng studied the equations, the more he worried that they might be dealing with more than one illness. Certainly the patients seemed to manifest different symptoms. Some showed dementia, others schizophrenia, and still others showed various affective disorders. What worried him even more were the handful of patients who couldn't be classified. They might be dealing with something completely alien.

Jeng took a deep breath and twitched two fingers on his right hand. The equations showing the symptoms of the two most recent patients jumped out of the circling formulas; one appearing before each of his eyes. He studied them as closely as he could, picking out each variable and analyzing it in comparison to every other variable. There were no similarities.

He was about to send the mathematical representations back into the master equations when he noticed a common variable in the third tier of factors. Blinking rapidly to disperse all of the other formulas, Jeng studied the equations even closer. There was another matching variable in the derivative of the seventh tier.

The personal data appeared in front of him as his mind requested it. He quickly skipped past the pictures of the two men. What they looked like wouldn't matter. It took him a few minutes to sort through the data, not being used to having to actually know specific facts about any individual. He was a quantitative psychologist...personal details didn't matter.

He paused in his search of the data. The two men had been on different ships and they'd been to different sectors of the Conglomerate, and yet the initial signs of illness were the same in both men. That's what the two similarities had to mean.

With a sudden shudder, Jeng realized he was going to have to speak to the two men. The thought of having to actually do practical psychology terrified him. That wasn't what he was trained for, and yet any clinical psychologist wouldn't know what he was looking for. They wouldn't be able to quantify the data the way he needed it. There was no other alternative. It had to be him.

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Jeng stared at his feet as he shuffled them back and forth; trying to do everything he could to not look at the two executives from the Board.

“How many people have you had contact with in the last twenty years?” one of the executives was asking again. Jeng had heard him the first time, but he'd decided to act like he hadn't heard. What did the question matter?

Jeng tried to look around the room, waiting for one of the executives to ask him for a third time. He wasn't really impressed with what he saw. The plasti-steel desk and rigid chairs didn't look comfortable to him. The room's windows were also opaqued, and Jeng desperately wanted to be able to look out at the skyline.

“How many people have you had contact with in the last twenty years?” one of the executives asked, again.

Looking up at both executives, he saw them staring at him with expectant looks on their

faces, at least he assumed they were expectant looks. He stared back at them, wondering what equations might emerge from their inner minds. What would their personality traits look like, or their phobias, or their little childhood insecurities? He wished that he could see those equations, but there was no way that was possible. Instead, he had to meet them face to face.

“Maybe two dozen,” he finally answered, although he said it so quietly he wasn’t sure they would have even heard him.

The other executive shook his head. Jeng wasn’t sure of either man’s name, and he didn’t really care.

“Why can’t you just have one of the clinicals talk to them?” the second executive asked.

Jeng shook his head, wringing his hands together. Here in front of these men, he suddenly understood how Alvin felt when they sent him to Jeng’s office. “A clinical wouldn’t know what to look for.”

“And you would?” the first executive asked. They seemed to be taking turns as they teamed up on him.

“Yes. I’ve seen the equations. I know where the nexuses lie. I would know what to look for.”

“People aren’t equations, doctor,” the second said.

Jeng shook his head again. These men were as ignorant as most of the people Jeng had heard about throughout his life. They didn’t think the human mind could be quantified, but quantitative psychology had shown that it could be done generations before Jeng had even been born.

“With all due respect,” Jeng said, trying his best to keep the condescension out of his voice, “You aren’t trained...”

Both of the executives held up their hands at the same time. “Sorry,” the second said. “I didn’t phrase my opposition properly. What I meant to say was that the two branches of psychology are so different, it’s often hard for a quantitative to understand what they’re seeing in real people.”

Jeng stood up straight for the first time since he’d entered the office. In his mind he’d been imagining what the executives equations might look like, and he thought he’d hit upon a differential that he could use against them.

“It has to be me,” he said, taking a deep breath. “The future of space travel could depend on what I, and only I, can learn from these people.”

The two executives looked at each other for a moment. “Very well,” they said simultaneously. “What are the names of the two patients you need to talk to?”

“Names?” Jeng was surprised by the question. He didn’t know the names of the people. He only knew their case numbers. What did names matter anyway? Numbers were all that were important. “I have only their case numbers,” he said.

The two executives again shook their heads. “Very well, give us those, and we’ll set up the interviews for tomorrow.”

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The two patients sat in large cushioned chairs across from Jeng. Both of them seemed unhappy to be seeing yet another psychologist, but what neither of them knew was that Jeng was

much more uncomfortable having to see them. Most of the best of the quantitative psychologists avoided human contact as much as possible, and Jeng was one of the best of the best. Having to sit across from two people who only a day earlier were nothing more than a collection of equations was unnerving.

He tried to clear his throat, but found his voice was still raspy. “Now, where were your two missions to?” He’d read their files, but he wanted to actually hear what their voices sounded like; well, maybe wanted wasn’t the right word. He needed to hear their voices.

The first man answered, “The Aguila Cluster.” He twitched as he said it. Magenta equations showing paranoid schizophrenia flitted at the edge of Jeng’s mind.

The other man sighed. “Iota Centaurus.” Equations of affective disorders came to the fore of Jeng’s subconscious. Now he knew which man was which, but he thought they were manifesting too many symptoms. Weren’t they supposed to be medicated?

The paranoid was a tall bulky man with thinning red hair. He was a cargo man for the Corporation and had been with the company for more than a decade. He’d been on more than two dozen trips and had never shown any signs of illness until he was caught scratching at a bulkhead, screaming that he needed to get away from the “Calique,” whatever they were.

The affective patient was a short and round man, not much more than five feet tall, but nearly two hundred pounds. He had sandy blonde hair that was longer than was currently in fashion. He was a wealthy man who had decided that he wanted to take a vacation to Iota Centaurus just for the hell of it. Having never been past the moon, apparently it was to be the grand adventure of his life. On the way back, the purser found him crying in his room asking

where his cat had gone. There were no cats on the ship, and a search of the man's history showed that he'd never even owned a cat.

“What kind of cat did you lose?” he asked the affective patient.

“She was spotted,” he said, obviously trying to hold back tears.

Jeng suddenly visualized one of the nexuses he'd seen in the equations, and he wasn't happy with what he saw. The man had obviously thought he'd had a calico cat, which was similar to what was trying to get the paranoid man. Calique and Calico.

He continued to question them, even though he was pretty sure it wouldn't do any good. Somewhere, there was another nexus point between the two men, but Jeng had no idea where it could be.

After an orderly had come in and led the two men away, Jeng continued to study their records. He hated to admit it, but the executives had been right in trying to tell him that this was pointless.

“Computer, are there any stellar similarities between the two destinations of patient A and patient B?”

The computer flashed a few trivial similarities, but there was nothing in them that pointed at a nexus. One had been to a star cluster, while the other had visited a singular star system.

“How long was patient A in hyperspace?”

“19.2 days.”

“And how long was patient B in hyperspace?”

“19.2 days.”

Jeng sat up straight as the image of the second nexus exploded in his mind.

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Jeng stared around himself nervously. The twelve members of the Board were arranged on a rising dais in front of him. Each wore decorative scarlet robes that seemed to belong several centuries in the past. Jeng felt himself on the verge of hyperventilation as he looked at the seven men and five women; their faces blurring together. The last time Jeng had been in the presence of so many people at one time was when he was ten. Now, more than twenty years later, he realized why he preferred the company of his equations.

“You can’t be serious,” one of the Board members said.

Jeng realized that it hadn’t been a question, but he decided to answer it anyway. “Every case that I could look into clearly showed that this madness manifested only in people that had been in hyperspace for nineteen to twenty-one days.”

“Every case?”

“Every case.”

The Board members chatted briefly to themselves. In a corner, a dozen lackeys, including Alvin, sat nervously waiting for when they might next be called. Alvin looked over and cast what Jeng thought was a nervous smile towards him. Jeng thought about smiling back, but somehow that seemed inappropriate as the twelve Board members began to quiet down.

“What are you suggesting?” one of them asked. Jeng had no idea which one was talking to him. He couldn’t differentiate any of them. All he could think about was how much he wished he could delve into their equations. Then he’d really know them.

With a deep breath, he calmed himself. “It seems pretty simple. Cut out any missions that would have a nineteen to twenty-one day transit through hyperspace. It might even be safe to go an extra day in each direction.”

There were several outbursts, and Jeng had no hope of tracking who was saying what.

“Impossible!”

“Do you know what that would do to the economy?”

“Do you know the panic this would cause?”

“There has to be another solution...there has to be.”

Finally, the Board members calmed themselves while Jeng stared at the ground, wanting desperately to go back to the lab where he could envelop himself in the equations of the human mind.

“We’ll let you know what we decide,” one of the Board members said. “You’re free to go, doctor.”

Jeng just stared. He didn’t understand. Wouldn’t they need him to help plan what they were going to do? When it became obvious that no one even realized he was still in the room, Jeng walked out, noticing that Alvin gave him what he thought was a worried glance, but it could have meant anything. Jeng really couldn’t read people; at least not without their equations.

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It was illegal, but for someone who understood computers like Jeng did, it was no problem for him to hack into the database and pull out the profiles of the Board members. He

quickly converted the information, limited as it was, into the equations he needed, and those equations now spun around the room at breakneck speeds.

Jeng just sat in the middle of the room on his cushion watching. Every time an interesting equation would pass, he'd snatch it and pull it towards him. After an hour of this, he began to notice several magenta equations that all looked similar to one another. The fact that the board members' profiles showed mental illness wasn't a problem; everyone had some kind of mental illness to some degree or another. The problem was that all of the equations had similar variables that led Jeng to a frightening conclusion.

He didn't know exactly how these anomalies would manifest themselves in the behaviors of the Board members, but he had several theories. None of them looked good for Jeng.

A quick twist of his wrist, and the lights came up. He practically leapt from the cushion as he raced to the wall, pushing a button to open his closet. Grabbing a small bag, he began to stuff it with things he would need. He didn't know where he'd go because there really was nowhere he could go. He would never be able to face people in the real world, but he knew he had to get out.

Just then, the door chimed. Jeng walked over and pushed the button to open the door while trying to hide his bag behind his legs. The door opened to reveal an even more nervous looking Alvin.

"The Board has made a decision," Alvin said.

Jeng tried his best not to look nervous, but he didn't have much practice in hiding his emotions from others. "Oh? And what's that?"

Alvin's hands twisted around each other even more than usual. "We don't have much time," he said. "They'll be coming for you soon."

Alvin pointed at Jeng's bag. "It looks like you've already figured out what they're going to do. I should have known you would."

"No," Jeng said, shaking his head, "I haven't figured out exactly what they're going to do, so can you tell me?"

Alvin looked up and down the hallway. "Come on," he said, motioning for Jeng to follow him away from the Boardroom. "I'll tell you while we get you out of here."

Jeng listened intently while Alvin explained that the Board had voted to basically ignore Jeng's proposal. They decided they would try to extend the trips that seemed to fall into Jeng's magical timeframe, if it was economically feasible, but there would be no announcement. They'd also decided that Jeng would have to be kept quiet, so they were going to have him taken into custody.

He'd laughed at that part. Given his history, he was already a prisoner. He would never be able to survive in the real world, so what could they be worried about? Did they think he might escape and go tell the media? That was absurd. He could never be around all of the people in the "real" world. He could only fit in with his equations.

"Don't worry. You'll be safe," Alvin said.

Jeng suddenly realized that they were at the front door of the building; a door he'd walked through when he was ten years old, and never again since. His throat tightened and his knees began to tremble. He didn't need his equations to understand terror.

“I can’t go out there.”

“You have to,” Alvin said, taking Jeng’s hand and trying to lead him, but Jeng was like a stubborn horse with his feet planted. “If you don’t, you’ll never be able to leave this building again.”

Jeng tried to smile. “I never thought I would leave, so I’m ok with that.”

There was the sound of hurried footsteps heading down the hall behind them. Alvin pulled his hand again. “You have to go. What about all those sick people?”

Jeng thought about them for a moment as he glanced over his shoulder. It would only be a few seconds before they reached him.

“I’m a quantitative psychologist. Individuals don’t matter.”

Alvin stared at him for as long as he could. “What about the people that are still going to get sick?”

It wasn’t his job to worry about people, he had to worry about structures within the mind, not people, but if he let the Corporation imprison him, he knew that a lot of people would get sick, and it would be all his fault. He almost smiled as he realized the magenta equations that would create in his own profile.

Jeng finally nodded. “You’re right...I...I...I have to do something...”

“There’s a boat waiting for you on the other side of the door. Go.”

A shot rang out from behind them, and Jeng watched as Alvin slumped to the ground, blood pouring from a wound in his chest. Jeng briefly imagined Alvin’s equations going dim before he raced through the door, but Jeng also realized he wasn’t just seeing Alvin’s equations

going dim, he had watched Alvin, a real person, die.

A boat sat idling in the street and Jeng jumped in yelling, “Go,” in his best imitation of Alvin. The boat sped away, and Jeng tried to calm his stomach as he watched hundreds of people gliding or speeding up and down the flooded streets. Above him lights flickered and danced, advertising things Jeng had never even heard of. That, along with the people made him think he could almost see the equations that were the real them. The equations that would identify them in his mind.

The man driving the boat turned to him, and Jeng wondered what variables would represent the different aspects of the man’s mind, but then he stopped himself. Instead, he looked at the man and saw his trimmed beard, slightly off center nose, and deep gray eyes. He was a person; a person with real hopes, real fears, and real problems.

“Take me to a...” Jeng wasn’t even sure where he was supposed to go. “Take me someplace where I can tell my story to someone that will listen.”

The boat sped away into a crowd of other boats. The Corporate Police behind had no way of following them.