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Deterministic Republic

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Deterministic Republic¹

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1. The Voting Booth

As the young couple got out and locked up the car, she turned to him once more. “Just don’t automatically hit ‘Next’ on every screen in there. Read it carefully and be sure you get your preferences right.” She punctuated her admonition with a soft punch to his left shoulder.

Half an hour of waiting later and David finally slid the accordion door to the dark booth open and entered. As he closed the door, a screen covering one wall brightened, a simple request filling his view. “Please connect your Individual Data Device to the system and provide consent to begin Voter Preference Analysis.” Below this message was a typical system code. He pulled his IDD out of his inside coat pocket.

Tapping the screen of his device, he enabled the connection and searched for the booth with the code shown on the wallscreen. Immediately, the booth displayed a standard too-long-to-read consent form for him to scroll through. Most of it was familiar: in a panic last night he read the entire online version. At the end of the form was the common “By clicking ‘yes’ below you agree to. . .” He sucked in a deep breath and slowly exhaled, Rachael’s voice in his head reminding him not to just click “yes”. At the end of the document, he sighed and thumbs the okay.

There was an old-fashioned camera shutter noise, and a picture of him as he is now appeared on the screen. Next to it was shown an image of the government-issued ID for one David Burgher. A wire mesh overlaid both faces, and after a moment the message “Identity confirmed” flashed.

¹This story is an extension of the paper “[Aligning Political Options and Aggregated Personal Opinions on the Issues](#),” published in this same issue of the *Journal of Humanistic Mathematics* (pages 369-389). It is an attempt to visualize what elections and politics might look like from the voter perspective if some of the ideas from the paper were implemented. The story is also an attempt to highlight how mathematics and data science are done, much the way a colleague of mine who teaches biology refers to shows like *CSI* as recruiting tools for science majors that use “dramatic pipetting” in the labs to show day—to—day science in action. The story is, as you will no doubt see, heavily influenced by watching far too many episodes of the *Twilight Zone*.

The screen blanked, and a copy of the Constitution appeared. Below this, appeared a progress bar labeled, “Voter preference analysis” which steadily moved along. He scanned through the Constitution, trying to be patient. The bar reached 100%. And sat at 100% for another several seconds.

Just as he is about to call out for help, the screen flashed to the next step. “Based on an analysis of your history, you appear to fit the following profile with regard to the issues in this election.” It displayed a large list with a sliding scale for each issue and offered him the chance to adjust the scales. He did so in a few cases, muttering to himself that he has no idea how THAT got onto his preferences. . . The computer accepted most of his changes without comment.

But the health care section was highlighted and the “Proceed” option was grayed out, preventing him from continuing. A pop-up balked at the major change he has made, offering to show him the records contributing to the projected profile. Talking out loud, he said, “I know what I said before. But it’s my mind to change.” He clicked the “yes, I want to accept these changes and proceed” button, hoping his decisions will benefit his sister and her son with their health crisis. “I swear they gave these machines artificial attitudes.” But it was not over: before it would accept his changes, he had to touch the screen physically, giving the machine a thumb print to attach to his voting record. The thumbprint was subjected to a similar verification process as his photo, with the print on his identification card for comparison.

His adjusted preferences appeared on the screen, giving him one more chance to alter his selections. A message box displayed “When you are satisfied with your profile, please pull the lever.” He still didn’t understand why the lever is there — clearly it was a holdover from a previous era, but, I mean, come on — everything else had changed about our elections, why couldn’t this change? Reaching out, he pulled the lever. An artificial “thunk” sounded, lending gravitas to his action. At the same time, the display blanked.

When it brightened again, the display showed a large square grid, with small, seemingly randomly colored squares filling it in. The only obvious pattern was the symmetry along the diagonal running from the upper left to the lower right. The squares started rearranging themselves, clustering together into larger squares of the same color along the diagonal. While somewhat distracting, the light show didn’t stop him from muttering out loud. “I bet this is meaningless. It’s just to keep us occupied while it does whatever it does.” In a few more seconds, it finished this effort, leaving fifteen or twenty large and different-sized blocks of various colors, and the phrase “Preference Component Analysis complete.”

The large matrix shrank and moved to the upper right of the screen. In the center of the screen an explosion of arrows appeared, emanating from a central point and appearing to extend in three dimensions. He noticed that there is one for each of the different colored blocks from before. Too fast to follow closely, a list of binary strings appeared in a column to the right of the arrows. Each entry in the list appeared at the same time a new arrow — in a bright yellow that doesn't match any of his colors — appeared in the cluster. Each time, the cluster rotated around a little, and a number was appended to the string in the table. He tried to follow what was happening, but the list grew fast, and the numbers were scrolling by too quickly. He thought the entries in the table were not just being added to, but were also re-ordering themselves. It seemed that the labels with the largest numbers attached to them percolated to the top of the list.

After another fifteen seconds, the action froze. A rectangle appeared around the top entries in the now-settled list. The rectangle expanded, filling the screen with ten binary strings and their scores. “Your preferences for the current slate of issues matches best with PAL unit 110010.” Indeed, that was the entry at the top of the list of the Political Algorithmic Logic units on offer this election. “However, your preference list ranks candidate 110011 a very close second. Here are their major differences. . .” He saw that the scores for them were 0.677 and 0.665, far closer than any others in the list. A three-column summary appeared to the side of the list, showing a list of issues, the positions of each candidate, and his preferences. Each of the items in the list had connectors attaching it to sections of the color matrix.

He almost panicked: this list of issues didn't match the list he adjusted earlier. But then he remembered these issues were called “composite issue constructs.” Supposedly, each one was a cluster of several of his preferences from before that had something to do with his personality or how he acts or something in relation to the choices others had been making? He wasn't paying that much attention in his intro psychology course.

Focused on the issues and the candidates' platforms, he chose the one that reflected, as best he could, his current thoughts and feelings. Not once was he tempted to review social media or the news to look for scandals, bad press, or other opinions about the candidates. Finally satisfied he had done everything he could, he wrapped up the voting, checking to see that he had a receipt for his vote on his IDD, and exited the booth.

His wife was waiting for him. Rachael reached out to take his hand. “See, it all worked just like they told us it would. Voting makes so much more sense now than it used to.” They turned to leave. This time, as they pressed through the protestors

outside, he was able to focus on what they were saying. Most seemed to be calling for election reform. They waved signs with “Take back our country from the A.I.” and “Software took my lobbying job.” A few were more abstract, falling back to old aphorisms like “To err is human; to really foul things up requires a computer.”

They dodged and ducked through the crowd, ignoring everything for the most part. Halfway to their car, a man approached. He was not holding a sign himself, but most of the slogans from the signs could be found among the plethora of buttons on his jacket. “Wake up! Do your duty!” the stranger said, as he forcefully grabbed and shook David’s hand. He let go after only a single pump — thankfully — and his left hand thrust a pamphlet forward. Reflexively, David took it, dazed at the suddenness of the interaction. He blinked, but as he recovered his wits and tried to give the pamphlet back, the man had already melted into the throng.

2. Discovery

That evening, David and Rachael sat sipping wine while another one of an endless stream of talking heads analyzed polling results. “It is too early to tell in some districts,” she acknowledged, while the program filled the air time with non-information. A few minutes later, the announcer said, “Going into the final hour of voting, it seems clear that the majority of the candidates for the A.I. Congress have been rejected by the populace.” The right third of the wall screen was devoted to a long, scrolling list of candidates on a repeating loop. Occasionally, the numbers by the identifiers changed, as various polling deadlines around the country were met. But the candidates at the bottom of the list never seemed to adjust, and with numbers that low, both the Burghers knew these will be eliminated.

“At least none of the health care reformers are in the waste bin,” David said. Taking another sip of wine, he relaxed a little. His wife nodded, and scooted closer to him, nestling into his outstretched arm.

“I still don’t understand how people used to vote for members of Congress. I mean, it makes no sense. Each district could only choose from a few candidates. How did they ever find one that matched their preferences?” she tucked her feet under her and polished off the last of her wine.

“It does seem ridiculous. And back then all the candidates were actual people! And you never really knew what they stood for or how they would actually vote on the issues. You just hoped they hadn’t been misrepresented, and pulled the lever, as it were.” He looked at her now-empty glass. “So, are we breaking the one-glass-a-night rule?”

She considered it, but said, “No, I just want to sit here and nap a little. It’ll be a few hours before the results are fully analyzed. Until then, we aren’t going to learn a lot more.”

He gestured to the scrolling list with his glass of wine. “Well, we already know a little. Like you said, a lot of the candidates for dismantling public health care are being rejected. So that’s something. I guess it was a little simpler to understand everything before, with candidates either being on the left or the right. Or the middle left, or the moderate right. Or. . .” He trailed off.

She picked up the thread. “Exactly the problem! How can you take so many issues and so many ways to look at things and reduce it to lining the candidates up from left to right? I can’t even imagine.” She closed her eyes for a second. “You know, I think another glass would be okay. We can always look at the results and the analysis in the morning.” She helpfully adjusted her position to allow him to go get her — them — more wine.

“I guess I’m in charge of pouring, huh?” he said, slowly standing up.

As he rose, she noticed something sticking up from his back pocket. “What has he got in his pockets?” she asked in a strange voice.

“What are you talking about, Gollum?” he turned around, a little baffled, but also strangely excited by the impression.

She coughed. Back in her normal voice, she sputtered a little, “Your back pocket. Something sticking out. Can you bring some water, too?”

He hurried off, returning with a glass of water. He turned to go back for the wine, but she stopped him. “Never mind on the wine. How about some decaf green tea?”

Shrugging, he obliged. After putting on a kettle to boil, he opened a large drawer. Approximately one thousand different scents wafted out. Rooting around he eventually found the right box. “We’re almost out,” he called over his shoulder. Closing the drawer, he started a search for two clean mugs. While he worked, she added the tea to a lengthening grocery list on her IDD. She was still looking the list over and tweaking it when he returned to the couch. Before he sat down, she looked up at him. “Well,” she asked, “what is that in your back pocket?”

“Oh, yeah,” he replied, reaching around for what turned out to be the pamphlet he received outside the voting center. “I forgot all about this. Some very intense dude shoved this into my hand and yelled something about waking up, and doing our duty.” The pamphlet was a little crumpled, but looked far more professionally

produced than one might have expected. “Looks like some real conspiracy theory stuff. Even the title is paranoid: ‘Deep Purple State’.”

Somehow, Rachael had managed to take over the entire couch. He waved the pamphlet at her. She pouted, but sat up straighter, making room for him. Once settled in, he opened the pamphlet. Glancing through the first paragraph, he snapped his fingers. “Didn’t they used to mark candidates by color? Some were red, some blue?”

“Uh huh,” she said. “It was connected to the old two party system. The red ones were more conservative, I think. And the blue ones more liberal. How on earth did they pick that axis to line the politicians up along?” She pointed at the pamphlet, “I bet that’s why these nut jobs picked purple. A blend of the old red and blue.”

“I don’t get it either. And I definitely don’t understand how we could have created a professional class of politicians in the first place. I know A.I. wasn’t all that good back then, but still.” He trailed off, scanning through more of the pamphlet. “Most of this seems like typical crazy talk. ‘The government is being controlled.’ ‘The PALs can’t be trusted.’ Same thing we’ve been hearing for years.” He continued to read, mostly for amusement now. “Wait a second, here’s something new. Read that.” He pointed at a paragraph.

She read out loud, affecting a nervous voice somewhere between her normal tone and the Gollum impression earlier, “Even A.I. cannot avoid the mathematical certainty of Arrow’s Impossibility Theorem, which guarantees there is no fair voting system, no matter how many choices are provided. In the past, our elections were dominated by scandals, gaffes, and memes. Now, rather than flooding us with fake news about a few candidates, we are overwhelmed with perfect information about too many candidates, lulled into believing that our choices matter and that our individual preferences are represented.” She ended in a barking laugh, resuming her natural voice, “Good grief! I don’t even think they got the details on Arrow’s Theorem right. They’re just using it to sound superior.”

“Well, they did get one thing right. We do have a LOT of candidates now. It can be a bit overwhelming.”

“But you don’t have to sort through them all yourself. Now that there is so much information about everyone available, the system can help narrow down what our true preferences are. It’s science and mathematics now, not opinion and emotion. Isn’t that better?” she asked, looking at him.

Meeting her gaze, he replied, “I guess so, but it’s hard to know. My parents are still lost in all this. My dad’s always complaining that we don’t know anything about

the candidates because it's too complex and too much is hidden from us. We don't really see how our preferences are determined. And he's never been much for social media, so the system keeps reading that as him wanting to vote for the candidates seeking to simplify the system and reduce the complexity — all the Luddites.”

She snorted. “That’s ironic, isn’t it? That we even have A.I. political candidates who are against their own technology? But the PAL units can do that without having a stroke. No person could faithfully represent a position that is diametrically opposed to their own good without some consequences. The PALs don’t care. Isn’t that better?”

“I know, but it’s really just a transition. They figure that in another few voting cycles, enough people will be used to it that the issue of technology versus human politics will go away and others will replace it.”

She thought for a second. “And it’s not completely opaque. The system does show you some of its calculations and process. That’s what all the weird arrow display thing is in the voting booth.”

He held up a finger. “Aha! But how did it calculate the composite issues? How are you supposed to see the analysis that got it that far?” He smiled. “You know, the Deep Purple State might be onto something.”

Shaking her head slowly, she reached for his IDD, which had been sitting on the coffee table. “May I?” He nodded, figuring he’d won this one, and she was just going to try distracting him from it. He leaned over to watch just as the tea kettles screamed from the kitchen.

Rushing toward it, he addressed the kettle, “Pipe down, you!” A minute later, he returned with a tray holding the mugs and a steeping pot of tea. “Okay, so what does my IDD have to do with this?”

Smirking up at him, she held it out. “Take a look for yourself.”

The tray safely placed on the table, he began to scroll through the information she had pulled up. “What’s all this? Of course. I forgot that the voting system downloads all its analysis for you as part of the receipt.” He scrolled some more. “But there is a ton of pretty technical work here. How is the average person — how is my dad — supposed to make heads or tails of this?”

A slightly hurt look washed over her. “Are you seriously telling me you don’t remember studying all this in your political data course?”

His eyes went wide, realizing the minefield he'd just walked into. "Rachael, dear, you know I was preoccupied in that class. There was a cute brunette who always sat a few rows over from me, and once she got to class, I really sort of did everything on autopilot in a daze. I think it was some sort of mental illness."

"Really? Is that why it took you so long to ask me out? A mental illness? Or did you ask me out because you were mentally ill?" The hurt look on Rachael's face had shifted, definitively, toward a glower.

Now fully panicked and recognizing that he was surrounded by land mines, David stammered incoherently. The only understandable word for several seconds was "but" , then he stopped and broke eye contact. Silence fell over the couple.

"Boo!" she shouted, startling him into tossing his IDD up in the air. While he fumbled to catch it, she fell sideways laughing. Eventually, he realized that he was not actually in any trouble. The laughter died down slowly, and she sat back up. "Seriously, didn't you get an 'A' in that class? How can you not remember how this all works?"

Grinning, partly from being in the clear and partly from thinking about when they met, he countered her newest thrust. "Yes, I did get an 'A' but only because I didn't have to take the final. All my work going into the final was enough. Thanks to all that studying we did together."

Now it was her turn to blush. Coyly, she restored their eye contact and reached a hand toward him. "It seems that you have a few gaps in your knowledge. I think you need to study some more, Mr. Burgher."

3. The Pamphlet

Long before dawn, he carefully extricated himself from the bed, leaving his wife behind to sleep. He knew she wouldn't rise for at least two more hours; she never did. Downstairs, he poured a cup of juice, and began scrolling through his IDD. Most of the messages and posts were not only slotted for immediate deletion, but also forgotten before they even registered. A few were from family or friends. Quietly, he muttered, "We can create A.I. to run the country, but we still can't filter spam? Something is definitely wrong."

As he continued to scroll, he almost missed it. But there it sat. *Sender: Deep Purple. Message: Wake Up, Dave!*

“How the heck?” he started to ask. Then he thought, “I bet this went to everyone.” But as he read the message header, he realized this was sent personally to him. It’s even addressed to him, and there is no sign it was mass-mailed. So either this organization hacked some serious security, or it got to him another way. And he doubted the hacking. After the debacles of some previous elections, the comm-tech giants and the government really stepped up their game. There hadn’t been a major data breach of a secured network in a long time. Or at least, there hadn’t been any made public. Wow, he thought, that pamphlet really amped my paranoia. But how did they get his contact info?

He put his juice down, and set his IDD near it. Walking around the kitchen island, he crossed to the adjacent living room and picked up the pamphlet, hoping for some clues there. And that’s when he noticed something new about the thin trifold document: In one spot, it wasn’t so thin. He could feel a square shaped bump under his thumb in the bottom of the middle section. Looking closely, he noticed a faint nest of silver lines tracing around the spot. It looked like a typical scan code that you could snap images of to access additional information. But the metallic tracery could serve as some sort of low-power antenna, he thought.

He carried the suspicious device to the basement. After rummaging for a few minutes in a disorganized toolbox, he extracted a multimeter. A few seconds of checking confirmed that this piece of paper was transmitting. Finding a thin-bladed knife in the box, he carefully sliced around the bump. Inside was the thinnest microchip he’d ever seen, barely thicker than the paper stock of the pamphlet. This was a lot of effort just get an account name, he mused. Briefly, he considered contacting the authorities, but decided to dig deeper first.

He stowed his tools and returned upstairs to the kitchen, bringing the paper/device with him. Setting it down on the counter, he noticed his untouched juice, and took a moment to think about the strange device. After downing the tart liquid and rinsing out the glass, he turned on the wall screen across from the couch. The screen could interface with everything in the house, so it seemed like a good place to start investigating. Not wanting to wake his wife by using the voice commands, he settled onto the couch and took a keyboard/trackball combination out of the drawer in the coffee table. He tasked the system with a full security sweep of the house and both their IDDs, comparing the data record from the last backup to the current system state. He ran a check for outgoing datastreams. While the scan ran, he started a large pot of coffee in the kitchen.

When he finally returned to monitor the house system’s progress, it had found nothing. Finally, he decided to search the news feed for information about Deep Purple.

It was all pretty much what he expected from a group like this. And nobody had reported finding any devices or security breaches connected to them.

He came to a decision. “Time to see what the fuss is all about.” He set the keyboard aside, and retrieved his IDD from the kitchen. He surfed to the message from the mysterious group, and opened it. From all the options running through his mind, none quite prepared him for what filled the screen.

Finally! I mean, seriously, David, did you think standard home or data security could touch us? That chip is smaller and uses less power than anything you’ve ever seen. Still, kudos for effort. It definitely makes us feel better about reaching out.

He fumbled the IDD, barely catching it before dropping it into the sink. Who...? Where...? He tried to frame a coherent thought, but it was no use. This was just too strange. Almost on autopilot he clicked to read the next screen.

Careful, David, that’s an important and expensive device you almost dropped.

Glancing around the kitchen, he started to worry. How could they know he almost dropped this? Did they just guess? Assume that anyone reading such a message would be clumsy? Or is it far worse? Looking back at the small screen, he saw an image of himself starting back, obviously from the selfie camera. Somehow, the fact that he knows how they are watching him didn’t make him feel better. He set the device down, turning it over to hide from the camera.

Breathing deeply now, he made an effort to slow his heart rate. There was an explanation for all this. His heart started to race again as he thinks, “But what is it?” And then his heart almost stopped. He slapped his forehead, as he realized the Individual Data Device had a rear facing camera as well: They were still watching him.

Welcome back is clearly displayed on the screen as he picked the phone up and turned it to face him again. *Here, this will help* appeared below the welcome. After three seconds, the screen filled with a map of the country. The outlines of each voting district were clearly marked. In the lower left was bar shading from black on the left to white on the right. The white was labeled 100%, while the black showed 0%. The camera must have been tracking his eye movement, because once he took in the legend, the districts started to fill in with shades of grey and black. When it finished, the map was quite dark, except for a few regions. The last thing that appeared was a title, “A.I. representative voting records, last 5 years.”

He stared, wondering what the percentages shown by the colors actually meant.

Just as he started to lose focus, a soft voice issued from the IDD's speaker. "Basically, Mr. Burgher, the color indicates how closely each of the elected A.I. have been acting in accordance with their publically known profiles, the ones that led to their being matched with voter preferences and elected in the first place. In the white districts, the representatives are consistently voting in accordance with their profiles. The darker the color, the farther the representative is from its profile." The voice paused while his eyes scanned over the map. "I take it the implications are clear?"

He must have been getting used to the situation, because he silently nodded. The voice continued, "Good. Now, for more context, notice the scroll bar at the bottom of the map." It wasn't there a second ago, but now he saw the line with a mark on it. Along it were tick marks, and the end points were labeled by years. The earliest year was sometime right after the country implemented the PALs, and it covered all the way to the present. "We'll give you time to explore and consider." The voice went silent.

Tentatively, he touched the mark and slid the map date from the present. As he dialed it back in time, the darker colors lightened, until, back toward the beginning, the map was solid white, or very close to it. He scanned along the timeline a few more times, watching the shading come and go, come and go. He was starting to accept their premise: something was definitely wrong. He set the device down, face up this time, and steadied his hands while he sipped from his mug. The warm coffee that he could not remember making splashes down his throat as his sips turned into gulps. The burning didn't even phase his numbed attention.

After another minute, he realized the mug was empty. This new data finally registered. He reached to set it down, and this triggered another thought. He smirked, knowing he had been played. Color returned to his face as he picked up the IDD and addressed the hidden group. "Anyone can make a nice map like this. It doesn't mean anything. Where is your data? How are you computing this so-called distance from their profile? I mean, you could be plotting anything about these districts. How do I trust you?"

For a brief moment, the silence that filled the kitchen gave him hope. Hope that he had uncovered the ruse and that all would return to normal. Or at least, normal once he got his IDD security screened. But a chuckle from the device shattered his calm. "Very good, Mr. Burgher. I knew we were right to reach out. You've hit it exactly! How can you trust us? How can you trust them? How can you trust... anything?"

His stomach knotted tighter at each question, until he could almost feel the coffee reversing its journey through his system. Before everything unraveled, both physically

and mentally, the voice intoned, “That’s why we want you to dig into this yourself. We could link you to the data or give you our data. We could give you our code. We could give you everything. But you need to see it yourself. To do it for yourself. When you’ve caught up to us, we will know. And we will contact you.”

He realized they were about to break the connection, and almost shouted, just keeping his voice low enough to not wake his wife, “Hold on. What if I don’t do it? What if I ignore you and pretend I never saw this?”

“Then this is goodbye, Mr. Burgher.”

The IDD went silent, and the screen blanked. He sat, stunned, his mind slowly following the thread of the conversation. Lost in thought, he wandered around the island that divides the open floor plan of the kitchen from the den and sank into the couch. The realization finally hit that he had no idea how to dig into this on his own. He started to ask his mysterious taskmaster, but the IDD showed only the typical background screen. Try as he might, he couldn’t recover the map, or the messages, or anything. His log showed that the device has been sitting, unused, since he went to bed last night.

4. Dead Ends

An hour later, his predictions had proven accurate: His wife was still sleeping, and he had no idea how to analyze the voting and political data that would reproduce that chart. He didn’t even think he could find the data. All he had managed so far was to access the public news summaries of the election and the analysis provided by various “experts” in politics. None of them suggested that anything was out of the ordinary about this election or about the system. He had only added one new piece of information: Going into yesterday’s election, there were 1,024 candidates, but only about five percent of them got enough votes to be elected. Many of the districts elected the same candidates, but none of them had earned a majority control.

At first, that result seemed strange, but digging up similar records from the last several elections showed similar results. And nobody had ever challenged it, so it must have been a feature of the system, right? Clearly, he was even less informed than he thought, so he went back to the basics and started reading more about the PAL 101010 electoral system and its precursors. His history background was rusty, so most of what he found seemed new to him. Like the fact that the idea of A.I. running the country would never have gained acceptance if it hadn’t been for a ridiculous presidential election cycle that had fifty different people campaigning! Prior to that

election, the final presidential ballot always had no more than three or four official candidates, and usually only two. But that year, the country's disaffection led to a complete fracturing of the major political parties into dozens of off shoots. And the dominance of social media made it almost trivial for all of the candidates to get enough support to make it onto the ballot.

He was unable to fathom it. How was a person supposed to have learned enough about any of them to make a choice? And then it hit him that those voters never really knew the candidates at all: the smear campaigns and disinformation were all they had, unless individuals were interested enough to tunnel into a mountain of data. But few of them ever did, it seemed, and the time required for that digging would have overwhelmed most of the voters.

Some of the analysts clearly suspected that a lot of the support in that final human populated election was less than genuine. Some surveys after the election uncovered large pockets of opinion that just wanted everyone to have a chance. Or to see how far the system would bend until it broke. And they had gotten their wish. None of the candidates got a majority, and there had not even been a clear plurality of votes. The other branches of government had stepped in, but there was no way for them to have proposed a solution that everyone would have found palatable. Once they appointed a winner, the public backlash opened the door for some team of artificial intelligence researchers to get a grant for adapting some of their work to governance. And from there, the Political Algorithmic Logic unit was born.

As he continued to read about it, things got only more confused. Apparently, every presidential election before the PAL system had two votes? A popular vote and an electoral vote? And they didn't have to match, but the electoral one determined the outcome? And the electoral vote was only loosely constrained to represent the popular vote?

When his wife found him later, he was seated cross legged on the floor between the couch and the wall screen, surrounded by information tablets and sheets of paper displaying a variety of information, shaking his head and mumbling. Rather than shake him from this, Rachael went to the kitchen, got a bag of hazelnut coffee from the cabinet, and got to work, purposely rattling the pot around and making more noise than necessary. Eventually, the aroma of the coffee and the sounds of another living being penetrated David's fog. Looking up, he noticed the bright light of morning everywhere. And the mess he was sitting in the middle of.

As he stood from the floor, it seemed every joint in his body made some kind of noise. He finally turned to look at his wife. Her face showed concern, but as his

mouth opened and closed a few times without even making sounds, she shook her head and pointed to a mug of steaming black gold on the counter. He ducked his head from her gaze and slowly made his way over. Just touching the mug reminded him not to burn himself on it, and he added a generous helping of cream from the pitcher before gulping a third of the brew in one breath.

He carefully set the mug down and stretched all over. Throughout, she watched silently, sipping her own coffee. As he reached for the mug again, she finally spoke. “What is going on?”

He seized this opportunity and unloaded everything. About the IDD being controlled by Deep Purple, the chip in the pamphlet. All of it. At no point did she interject. In fact, she couldn't: the caffeine and the mania of the morning that gripped David carried her along so fast she could hardly breathe. She had no idea how he was getting any air as he kept racing through it. He finished with the little new information he had found.

When he finished, she was silent, staring at him. He swallowed hard, then tried to down another dose of coffee, but she put her hand on his arm and gently stopped him. She stared into his eyes, concern evident in her scrunched brow. Slowly, her eyes drifted to his IDD sitting on the counter. Then to the pile of other materials on the floor of the next room. Then to the wall display showing the results of last night's election. Then back to him. Slowly and deliberately, she leaned back against the refrigerator and sipped her own coffee.

Just as the tension in the room was ready to pull him out of his own skin, she set her mug down and glanced at the wrist interface for her IDD, a color-adaptable one David had gotten her for her last birthday. Finally, she spoke. “I guess we aren't going wine tasting today, are we?”

He blinked, realizing that it was Sunday, and what he had done to their plans. “S...Sorry,” he stammered, “...but did you know that elections used to be on Tuesdays? I mean, people had to take off work or get up early or whatever to vote. Seriously, how did they expect to get participation? No wonder voter turnout was always so strange.”

She put a finger to his lips, interrupting his rambling before he could continue his history lesson tirade. “I know. I paid attention in that political data class. Remember? I'm the cute brunette that made sure you passed?” He fell silent again. “Good thing you're married to an information specialist. Can we eat first, or do we have to save the country right this second?”

5. Investigation

An hour later, both of them were stuffed, and the combination of solid food and her presence had calmed him down. He started to gather the dishes, but she held up a hand. “Leave that. Let’s see what you’ve got on the complete collapse of our sociopolitical structure.” He nodded, kissed her cheek, and sat back. “Besides, you have so much caffeine in you, you’re vibrating. You’ll probably drop all the dishes before you can get them to the dishwasher.”

He smiled. “Great! Letting this sit has been driving me nuts.” He paused. “But first,” he paused, a sheepish look on his face, “can you remind me about that class? Maybe get me up to speed so I don’t have to relearn it all while we dig into it?”

She rolled her eyes, wondering again how he passed. “Alright, you have the basic context figured out. Elections were getting more complicated, with too many people running and not enough information to clearly understand what they said they would do if elected, much less to trust they would do it. And more and more people were feeling alienated as the candidates increasingly tried to describe their positions along some hypothetical line, with some on the far left, others on the far right. It sounds like a very confusing time to try to engage politics. And that’s what everyone thought; voter turnout reached an all-time low, with only 12% of the registered voters casting ballots. Worse still, only 40% of the country was even registered to vote by then. It effectively put the decision for president in the hands of the electoral college even more than ever.”

He interrupted her. “Yeah, can you explain that last part? Why did we have a popular vote and an electoral vote? And why didn’t they have to agree?”

She thought about it. “You know, the Electoral College goes back a ways. And I don’t think I ever made sense of that part. It just was. Can we skip that for now and just get started?” He nodded and followed her out of the kitchen to the mess he had left in the next room.

“Maybe we should start with the last election?” he said. “Then we can look at what was known going into it, and figure out how that compares with what has happened since?”

“We have to start somewhere, and that sounds as good a place as any,” she responded, looking around. “What did you do with the interface for the wall screen?”

A distracted “um,” was all he could muster. But at least he started looking. “Found it!” he shouted in triumph, pulling it out of the couch and passing it to her.

She turned it over in her hands, looking from it to the couch and back. “How did you...” Her question trailed off, and she gave up. “Let’s just get to it,” she said, and starts to sit down.

A panicked yelp from him froze her halfway to the cushions. “Let me see if anything else is in there first. I’d hate for us to sit on something we need,” he clarified, while moving everything around. “Okay, all clear!”

She sighed, and settled in with the keyboard interface in her lap. After about thirty seconds of tapping on the keys and clicking on links, the wall screen split, showing a map of the country’s districts on the left and a list of the binary strings representing candidates from two years ago on the right. Each was colored to match the other. “So the candidates who didn’t win any seats are in black,” she explained. It’s almost 95% of the list. “I think we can drop them for now.”

All he could do was nod. He had just spent ninety minutes trying to pull this together. “How did you get that so fast?”

“Oh, this is just the results from the last election. One of the news outlets posted it.”

He shook his head, feeling a little better. “But if we’re going to do this, we should dig up the raw data and explore it, right? Can we trust the displays from the news outlets?”

Without moving her head, her eyes tracked to look up at him. “Jeez, this Deep Purple really has you going.” She focused on the wall again. “But you’re probably right. We can download the original data, make our own plot. Then we can compare the two.”

He crossed to the kitchen and started clearing dishes from breakfast. She tore into the keyboard, and he didn’t even have time to feel like he won a victory (or clean the dishes) before she said, “There,” and sat back.

He walked over to her on the couch, blinking to lubricate his strained eyes. “This is going to go a lot faster with your help,” he complimented her. The wall now showed four panels. The upper row was the same as a few minutes ago. Below it was a similar set up. “So the bottom ones are my plots from the original data on the government web sites.”

He stared at it. “They look totally different.” He started pointing out some of the districts, but before he got very far, she smacked her own forehead.

“Omigod! Hold on.” She banged away again, and a color wheel overlaid the display. She used the track ball on the interface to spin the wheel. As it spun, the lower map and list changed colors slightly, fading from one scheme to another too fast to follow. “Yep. I just need to figure out what colormap they used. Hold on.” After another minute, she sat back, watching as the bot she just created adjusted the color wheel for her. As it did, a number in the color wheel changed, eventually settling on a value of 0.98. When it did, the map on the bottom was almost indistinguishable from the top map.

“What did you do?” he asked, completely lost.

She smiled at him. “This is something you find a lot. My original map used a different way of assigning colors to the candidates. But the colors are usually organized into groups, called colormaps. So I just wrote a quick routine to try all the standard colormaps until it found one that gave results close to the published map. It isn’t perfect, but it’s close, only 2% of the variation in color isn’t explained by the map.”

He stared at her. “I still don’t understand what you did. Or how you did it so fast.” Smiling, he continued, “but I don’t need to. Let’s keep digging.”

It was her turn to stare. “What do you mean, ‘let’s’? I seem to be the one working here.”

“I’m management and ideas. You have the technical skills.”

“No, you get the coffee. I do the real work.”

He was just about to give in when an idea that might keep him from becoming a permanent gofer hit him. “What about that remaining 2%? Did they just use a nonstandard colormap?”

She stopped in the middle of raising an imperious finger. “I don’t know.” Tapping away for several seconds, she produced another map, this one filling the left side of the screen. “So if I color each district white when their color and my color match, and black otherwise, we get this.” There was a cluster of districts in the center of the country, all touching each other, that were colored in black. It was not many, but they did stand out.

“That doesn’t seem to be a random thing, does it?” he asked.

“No, that really is odd,” she said, “but not because of the spatial pattern. Or at least not just because of it.” Another few taps and the two candidate lists appeared to merge into one, but most of the identifiers were grayed out. “Look. I grayed out

the candidates in districts where the two color schemes align.” She scrolls through the list of candidates. “And out of the 1,024 candidates in the last election, the same candidate won in all the mismatched districts. It’s candidate...10010010000.” She continued to scroll. The data display was moving too fast for him, so he watched her face, amazed. Until her look of concentration wrinkled her forehead. He turned back to the screen as she said, “What the...? That doesn’t make sense! There are too many candidates.”

“What do you mean?”

She set the key board aside and stood. Taking his hand, she dragged him off the couch and over to the wall. Pointing she said, “This election was supposed to have 1,024 candidates? Well, look. All the candidate names have 11 digits!” She folded her arms in front her as if declaring victory.

His face must have betrayed him. Before he could ask a question, she shrugged. “Let me guess, you don’t remember binary either?”

“Oh, binary,” he said, attempting to recover his standing in her eyes. “That’s with ones and zeros, right? And so 1 is written 1, two is 10, etc.?”

She nodded slowly, a little of her respect for him returning.

“So in binary, you would need...” he trails off, thinking for a second, “ten digits for 1,024. Assuming that you start with a string of ten zeros and end with a string of ten ones. So the first candidate on the list is number 0 and the last is number 1,023, right?”

More respect. “Good. So why are there eleven digits?” More staring. “Well, we can’t be the first people to see this.” She tapped away; a search window popped up in the left side of the wall, and just as he was starting to follow her path, she exclaimed, “Aha! There’s always been at least one more digit than needed. It’s so they can avoid candidates with a leading zero, like ‘candidate 0000110010’ and the like. Adding one more digit lets every candidate start with a one.”

“Okay, that makes sense. After all, who would vote for a total zero?” He smirked.

“Anyway, how does this help us?” she asked, trying to gloss over his “joke.” She started back in on the keys, shushing him when he tried to suggest something. He wisely decided to deal with the dishes. Five minutes later, she sat back.

“Okay, look at this. Here’s the same map, showing the differences between the closest standard color match and the actual results, for the last twenty elections, in a time

lapse slide show. Let's see what it shows," her voice faded as the animated map, and its implications, pervaded the room.

Wagging a finger at the wall, he struggled to get his thoughts to stream from his lips in the right order. "So, elections, for the last however long... This is not an accident, right? I mean, did we just uncover a conspiracy? Are those same districts always the odd ones? What do we know about the winners in those?"

"Yeah, I'll check. This is really starting to freak me out." After a few seconds, she had results. Her tone was flat. "It's always 10010010000. Every one of those districts, every year. Sometimes with an extra zero at the end, when there are more candidates; sometimes fewer. But it's always that same starting string." She copied all the data into a separate file and looked at the summary. "And it gets stranger. In every election, there is exactly one more candidate than there should be. That's why the colormap never aligns. It's one more color needed than we have, so it's recycling the list."

"Huh?" was the only remotely coherent sound that comes out of his mouth.

"See, because of the design of the system, there should always be an even number of candidates: 512 or 1,024 or 2,048. But there is an odd number of candidates in every election."

"Why are there always an even number?" At this point, he surrendered to bafflement and just asked the questions.

Earlier, her look would have made him feel a little bad for how little he recalled from that first experience in class together. Now, though, it seemed there were bigger worries. She closed her eyes, inhaled deeply, and started another lecture. "It's because of the Issue Committee, remember?" It was clear he did not. "Every election cycle, they determine, using polls, simulations, and the latest worldwide data, what the key issues are and what the main options for each are in the next cycle. It's usually around ten issues, sometimes more, sometimes less. And for each issue, there are two options. That gives you two raised to the number of issues different combinations of decisions. And that generates all the possible A.I. candidates, so that every voter's potential preferences are available."

"That does ring a bell. And the candidate designations are based on that, right? The issues are listed, and the one or zero for each specifies the candidate's position. So you have a bunch of possible platforms and combinations. You can still override your match, but you always have more options than the old human centered system." He paused. "Weren't there a bunch of single issue voters back then?"

“Exactly! Since you had only limited options, and your particular set of opinions was almost never matched by either one, people tended to focus on a few key issues and ignore the rest,” she replied. “It led to some really strange outcomes, where the voters would sacrifice everything that was really in their interests, and often that of the greater good, just to get a candidate who felt the same on a hot button issue.”

Turning to the wall again, with reluctance in his voice, he asked, “How far back does this go? Where there is one extra candidate, and that one is winning in these same districts?”

Their breathing was barely audible in the room, overwhelmed by the clacking of the keys. “All the way. To the very first PAL system election.”

After sitting in silence for a while, the images on the wall screen faded, replaced by a soothing video of a fish tank. The transition woke them up. “Look, there must be an explanation,” David reasoned, “maybe the extra A.I. is supposed to be there. It’s part of the system oversight or something.”

Hesitating, she replied, “Yeah, maybe. What about taking this to your uncle Tanner? Doesn’t he do something related to the election system in his work?”

David snapped his fingers. “Good idea! He can explain this. Or show us what we missed.” He paused. “Still, I don’t think I want to send this out electronically. Let’s go over there in person. Just in case.”

6. Side Trip

An hour later, they were still trying to make their way to Tanner’s house. Traffic was far denser than expected for a Sunday. “Wonder what’s going on?” she said. “Tune in some news. Maybe local info can explain.”

He didn’t move. She quickly realized something was definitely off. “Honey, what is it?”

Since they were, for all practical purposes, parked at the moment, he went ahead and reached across. “Take a look. I pulled up the traffic map.” He turned his IDD so she could see the screen. The city was normally a network of green lines on the less used roads, with a lot yellow and a fair number of reds, indicating the more heavily used areas. But the current image showed a baseline of yellow, with a lot of red. And the sections of road nearest them were displayed in black.

“What the heck does black mean? I’ve never seen...” she whispered. “How long are we going to be here?”

“I don’t know, I’ve tried to find an alternate route. So far, nothing is working. And it’s even stranger. Look.” He played with the device a little more, then turned it so she could see. “It’s not just here.” The map was now zoomed out, showing a larger section of the country. The major highways between cities were in yellow, and most of the nearby cities, even the smaller towns, seemed to be in red.

“That’s insane. There has to be something on the news about this.” She reached to the infotainment screen in the car, searching for news. It wasn’t hard to find. Every channel she accessed has a talking head with a traffic map overlaid. It wasn’t that unusual for all the news outlets to synchronize like this, running similar stories at the same time. But as she flipped through the options of different faces to deliver the information, the synchronization seemed much deeper than just the general idea of the story.

“Watch the map,” she said, as she scrolled through the choices. And he watched. But no matter how many channels she flipped through, the map was constant. The same map. In the same placement on the screen.

“That’s weird, right?” He shook his head. “But don’t they all get their maps and updates from the same basic service? Wouldn’t that explain it?”

“But why did they all set up exactly the same display in exactly the same location on the screen?” she countered. “Let’s see what they’re saying.” She stopped changing channels to let them listen. A minute later, and they felt like they knew less than before. “So they are reporting that the traffic has backed up everywhere. For no reason. There’s no fires, storms, announcements. There’s not even a sudden rush for tickets to a concert.”

“Why don’t we check another broadcast?” he suggested.

The new channel, with the same map and similar positioning for the announcer, was just saying “And to repeat, we are noticing...” when they tuned in. And then she proceeded to say the exactly same thing the last one said.

They looked at each other. “Did she just repeat the other guy’s words?” she asked. Whereupon she started alternating between the two feeds. Other than the voices themselves, the words formed a continuous message that was easily understood. Even though it contained almost no information content.

He closed his eyes. “Stop. It’s hurting my head.” Rubbing his forehead he contemplated. “So, not only is it the same story, but the same words with the same map and the same timing. How does that make any sense?”

By this time, traffic had moved a little, and she saw an option. “Look, it’s a nice day. Let’s park and walk over to Tanner’s.” She turned the wheel and ducked the car into a spot on the side of the road. “We may never get the car back out in this mess, but a walk will help us clear our heads.”

As they got out, he opened the trunk and pulled out a backpack. “I’ve got our data here, and a few other things.”

She shook her head. “You and that ‘bug out bag.’ I can’t believe your brother convinced you to buy one from him.”

He stiffened. “It was a solid investment. His Kickstarter got a lot of support.”

She laughed as they started walking. “But didn’t it seem improbable that a bunch of people who wanted to live off the grid and prep for disasters were going shop for their supplies online using credit cards?”

He held out a hand. “Stop. Point taken. But nonetheless, we now have a backpack of useful gear.” He looked around. “Why don’t we cut over a block? Maybe the traffic is a little clearer there, so we don’t have to breathe all this or hear all this. And I’m thirsty, come to think of it.”

“Sure, but you seem to have forgotten the map being black everywhere.”

“I can dream, can’t I?” he smiled at her.

They walked a block over, passing a few people on the street. Everyone seemed to be going about their typical day. When they rounded the corner, he pointed at a store front. “I remember that place. They’re the only spot that carries Double Jalapeno Corn Puffs.” He started towards it.

She put a hand on his shoulder. “Uh, dear? Notice anything?”

He stopped. “Now that you mention it, it’s a lot quieter over here.” Looking around, he asked, “Where are the cars? Isn’t this supposed to be as jammed up as the other route?” Instead, traffic over on this block looked perfectly typical. “Let’s go get a snack. Maybe someone in the store can explain.”

They entered the store, and the clerk at the counter smiled at them. The few other patrons ignored them. In all ways, nothing seemed unusual. Rachael noticed a screen

behind the counter. “You go find your snacks. I’ll talk to the clerk and see what the news in here has to say.”

He nodded and turned to hunt.

She approached the clerk. “Excuse me, but has there been a lot of traffic today?” she asked. The screen over the counter seemed to be showing news, but there was no traffic map in evidence.

“Not really,” he replied. “Pretty boring day, if you ask me.”

She wrinkled her face at this. “That’s strange. Just a block over the cars are at a complete standstill. And every news source and traffic app shows it that way everywhere.”

“Everywhere?” he asks. “Like the whole city?”

She shook her head. “No. The whole country. Has the news mentioned anything about it?”

Now it was his turn to shake his head. “Nope. Maybe your apps are messed up?”

“Maybe,” was all she managed while fishing her IDD from her pocket. As she scrolled around the device, her husband arrived. Glancing from the corner of her eyes, she blinked, and turned to him. “I thought you wanted one thing?”

He looked down at the armful of plunder. “But you have to wash it down with something. And then I realized that I should eat a little healthier. So I picked up some fruit and dairy products.”

Her gaze just about knocked him over. “Are you seriously trying to convince me that an ice cream sandwich is a healthy dairy product? And that a fruit pie counts on the good side of the balanced meal plan?”

“What? I was going to share,” he offered weakly. “We may be walking a while. Gotta keep our strength up.”

“You know, it’s really hard to argue with logic like that,” she said. “But maybe we don’t have to walk. The clerk hasn’t heard anything about our traffic situation. And look,” she says, pointing at the screen of her IDD, “the traffic apps all show normal now. No giant, countrywide log jam.”

“How is that possible? There’s no way that could have cleared in just ten minutes.” He slung his supplies onto the counter. “Whatever, let’s just pay and get going.”

The clerk rang up the “meal” and delivered the total.

David held his IDD up to the scanner while thumbing the banking app to authorize payment. After several seconds, instead of the normal green light and happy sounding chime, the clerk’s device displayed a red warning. The harsh double beep from it startled them both.

“Oops. Must have hit something wrong,” David said, thumbing everything again. Watching the process carefully this time, he didn’t see anything odd. But again, the warning and alert tone were his reward. “Great. First the traffic apps are busted, now I can’t buy a snack?”

Impatiently, his wife reached across. “Try mine.” But after scanning her IDD, they were no closer to owning the pile of calories.

By this time, other customers were lined up behind them. “Look, folks,” the clerk said in a careful but firm tone, “I don’t know what is going on. But it sure seems like you got other problems. I’d appreciate it if you could let the paying people behind you get on with their business.”

“Yeah, okay,” they said together, and left the store empty handed. Ten minutes of hunting, gathering, and questioning, and all they had to show for it was confusion.

They turned up the street, heading toward David’s uncle once again. “Now I’m hungry. I was just snacky before, but after getting that close to food...” he said.

“Let’s just walk. Something is going on. Probably an issue with our IDDs.” She stuffed hers back into a pocket and quickened her pace. Reluctantly, he did the same.

They remained silent for a few blocks. Taking her IDD out of her pocket, Rachael started to say, “Maybe one more try,” when a dark SUV skidded to a halt about 20 feet in front of them. Two men in crisp, dark suits got out and approached. Both wore mirrored sunglasses. The taller one stopped and stood, feet about shoulder width apart, his body turned slightly away from them, but staring straight at them. The other came a little closer with one hand held out, palm facing them. His other hand was reaching into his jacket.

David turned his head slightly, and his peripheral vision caught movement behind them. Two more men were approaching from the rear. He looked at his wife. The expression on her face made him reach out to touch her shoulder. “Honey, I don’t...”

But before he could say much to calm her down, her eyes narrowed, and her voice sharpened. “What the hell do you think you’re doing?” She continued striding forward, straight at the closest of the men. “Get out of our way and leave us alone.”

He'd seen her like this a few times. Woe to the poor server who messed up an order! But this was looking to be a little more serious. "Mrs. Burgher, I need you to step back and calm down." He continued reaching into his jacket, withdrawing a slim folio and snapping it open. The sunlight glinted off a badge, and the words "Homeland Security" were visible in large print on the identification card.

She was undaunted, and starting to really warm up. But at least she stopped advancing on them. "Now you listen here. You can't just confront citizens like this and intimidate them. We have rights." Just as her steam was building, the two men in front of them both winced and clutched at their heads. Dropping to their knees, they both grunted and strained, but succumbed to whatever had hit them. They dropped to the pavement on their sides, but after a second or two, lay still, eyes closed.

David quickly glanced at his wife. Neither of them appeared to be affected. He continued to turn his head, checking on the men behind them. Both of them were down as well. "What just happened?" he managed to gasp.

Before she could even come up with an answer, two small quad-rotor drones dropped from above to about ten feet off the ground. The drones were silent and colored to perfectly blend with the urban surroundings. Mesmerized by them, neither noticed the woman who slid between them silently. She hooked her elbows through their arms and tugged them into motion. "Come on! Before this attracts more attention."

Too stunned to resist, they stumbled along with her. None of them noticed a third drone, sleeker and hexagonally shaped, that separated from the roof of the SUV to follow them.

7. Down the Rabbit Hole

After what seemed like an hour, the three of them finally stopped walking. Neither of the Burghers had a clue where they were; their escort had taken them through alleys, tunnels, and through so many small store front businesses they had completely lost their bearings. She let them rest for a minute or two under the awning of what seemed to be an apartment building. She had ignored any questions and shushed them enough that they stopped asking questions early on.

They looked around, expecting to see authorities approaching or empty streets or everyone pointing at them. Instead, it was all depressingly normal. Just random people walking around. Going about their days. Going about their lives. Unaware

of anything that has happened. Finally, David couldn't take the quiet. "Look, whoever you are, what is going on?"

She faced them and glared, but didn't speak. Instead, she pointed to her ears with her right hand and then circled it in the air over her head. Rachael ducked her heads from under the awning to peer up, but the girl grabbed her shoulder and yanked her back. A slashing motion from her made it clear that, for now, they should just be patient. And that their guide/kidnapper was paranoid. The girl turned away to keep watch.

Resigned, David gave up on conversation. He reached into his pocket and pulled out his IDD to see where they were. But something seemed wrong. It wasn't connected to the network. He tugged his wife's arm to point out the problem just as their new friend glanced at them again. Her eyes widened, and her hand shot out to grab the IDD. She fumbled it off, and with her left hand withdrew a dark bag from inside her coat. The material of the bag seemed stiff and had a metallic sheen to it. She dropped the IDD into its depths and then held out her hand to Rachael until their other IDD was safely tucked into the bag. The girl was now definitely agitated.

The Burghers stared at each other. It seemed clear that the girl wasn't trying to hurt them. But that was about all that seemed clear. Rachael reached over to clasp David's hand. They stared in silence for another few minutes.

Just when their patience was all but gone, and the girl was almost vibrating with nervous energy, a completely ordinary sedan parked right in front of them. In one window was the logo of a ride share service. The passenger window slid down, and the driver leaned across. "Alice? I hear you're looking for a ride to the Voting Rights Museum."

They heard the girl speak for only the second time. None of the nervousness was apparent, but it was clear that "Alice" was ready to be off the street. "Bob's your uncle!"

The driver nodded once, and they heard the click of all the doors unlocking. Alice climbed into the front after ushering the couple into the back, and the car pulled away. David started to ask, "What's going on?" but before he can say anything, the driver held up his right hand in a curt, almost military signal to stop talking. David sat back. "Bob" nodded to "Alice," and she began pressing a series of buttons on the infotainment system in the center console. The windows all darkened, and the cabin filled with a low, squelching, electronic feedback sound. It wasn't loud, but was definitely annoying. Finally done, she turned to them.

“Look, I know you have questions. I know this is confusing. But we have to get you off the streets, and we can’t leave any trace. We’re trying to protect you.”

Rachael took charge. “I get that, Alice, but we haven’t done anything wrong. At least, not until your drones knocked out those agents and we fled the scene.”

The girl smiled. “I think you know my name’s not Alice, but I guess it will do for now.” Her smile was almost friendly. “And you’re so very wrong about not doing anything.”

The driver nodded his head, and his deep voice contributed, “Yeah, they don’t mobilize a response like that every day!”

“A response like what? It looked like a few guys in an SUV. Just like every single government apprehension on every movie ever made.” Rachael wrinkled her brow. “I mean, come on, there’s nothing special about that.”

The driver shook his head. “I’m not talking about the guys in suits. That was just the clean up. I’m talking about creating a massive traffic jam and hacking your systems to route you off the main road and get you out of your car. Only seen that done once before.”

The husband and wife made eye contact, and David sighed. “I guess we did notice that. We thought it was just a glitch or something,” he paused before mentioning what happened after the election. Looking into his wife’s eyes, he could see that she had the same concerns. “So who are you two?”

Alice turned to them from the front seat and held up a Deep Purple pamphlet. “Look familiar?”

Oddly, the fact that these two were clearly connected to the shadowy organization that bugged them and started all this made them feel better. “So you’re Deep Purple?” he asked.

Her eyes rolled. “Obviously, we aren’t the whole organization. The two of us are just field agents.”

“Spies?” Rachael asked.

This brought a snort from the pair in the front seats. “Hardly. We just don’t have a lot of tech skills to run the infrastructure. So I drive, and Alice . . . recruits.”

By this point, Bob had driven them into an unfamiliar part of the city. But if they had been expecting to get lost in the slums or the shipyards, they were disappointed. They’d never been to this area because they simply couldn’t afford it. “Look,”

Bob said, “we’re taking you to folks who can explain it all better.” He pulled the car past a gate and into an underground garage that was empty, except for a few cars and some delivery vans.

He stopped the car near an elevator. Alice said, “Take the elevator to the tenth floor. Someone will meet you.”

“You’re not coming with us?” Rachael asked.

“We told you,” Alice said, “we’re recruiting, not the brains. From what I gather, you need to talk to the folks upstairs.”

Rachael and David exchanged glances. Shrugging, he said, “Well, I guess we should thank you for getting us this far,” and held out a hand.

Everyone shook, and the couple headed to the elevator. They almost made it to press the button when Alice cried out. “Oh, crap!” They turned to see her running toward them, reaching into her jacket. Both of them tensed, but relaxed as they realized what was going on. She stopped and held out the black bag with their IDD’s in it. “Don’t take them out. The tech team can grab your data for you, and clean these of surveillance. In the meantime, the bag blocks any incoming or outgoing signals.”

David accepted the bag, nodded, and reached across to summon the elevator.

Once onboard, they clasped hands. He leaned over. “In case everything goes wrong, just remember, I love you.” She kissed him briefly, and they separated lips just as the lift halted and the doors began to open. Whatever they had expected, this wasn’t it.

A completely normal office layout covered the floor. The central area seemed to be cleared for large working meetings, with desks and screens around the perimeter of an open space. Cubicles surrounded this space, with a clear path between it and the walled offices along the exterior walls. People were working away in their stalls, walking between stations, pushing carts of papers and devices. It looked just like an everyday place of business. Right down to the smartly dressed assistant standing to the left of the elevator with a smart tablet, waiting to greet them.

“Welcome, Mr. and Mrs. Burgher. Please follow me.” He turned on one heel, and marched down the row of workers. Lacking any options, they followed him to a corner office. The inner and outer windows were all blacked out, but it looked fairly typical. The chair behind the desk was empty. Their guide swept his hand to indicate the two chairs facing the desk. “I’m sure you’d like to rest a minute. Would you like something to drink?” His smile was almost enough to make them forget how they got here.

“Uh, I don’t know. What have you got?” David managed.

“Whatever would make you feel more comfortable, sir.”

“In that case, I’ll have an Irish coffee. You dear?” he said, turning to his wife.

She shook her head slightly. “No, I think just some water. Do you have anything to eat? My stomach is flopping all over the place.”

“Say no more, Mrs. Burgher. I’ll be back shortly.” He spun to the door while they settled into the large, cushioned chairs. Then he snapped his fingers. “I need to get your devices to the tech team. Can I have that bag, please?” David hesitated for a moment, looking to his wife for an opinion.

Their guide interrupted. “It’s okay. If you’d prefer to keep them, we can do it later.”

That settled him on it. He handed the bag over. “No, let’s see what we have that pulled us down this rabbit hole.”

“Very good, sir,” came the polite response. “I will leave the door closed, to give you privacy. But it’s unlocked. There are private facilities behind that door if you would like to freshen up.” He left, gently closing the door behind him.

David tried to be gallant, and offered his wife first crack at the facilities. She paused, looking into his eyes. After a second, her eyes went wide with concern. “Are you okay? You look a little pale.”

“No, I’m...” he started to say, and then the pale turned almost green. He barely made it to the washroom before his sudden nausea overcame him. Rachael ran after him. When he finally sat back and leaned against the wall, she knelt beside him, her hand on his shoulder.

Her face demonstrated a concern that her next words hid. “What happened there, champ? I thought I was the one feeling all nervous and sick?”

He could only shake his head, exhausted from the effort to purge his system. They leaned together for several minutes, resting. Finally, he whispered, “Help me up. I need water.” As he sipped water from the sink, their guide from earlier appeared at the doorway, reflected in the mirror. She turned to face him.

“It’s not uncommon,” he said flatly. “You’ve been experiencing some rather dramatic events, and your bodies are not really used to the way adrenaline can mix with anxiety. As soon as things calmed down, your body needed to find a way to deal with everything. It happens.” He held out two large, flat, chalky tablets. “Antacids might help.”

David turned from the sink to look at the proffered medicine. “No,” he said slowly, “I think it’s passed.” He straightened a little.

“Still,” their guide chimed in, “it would be a good idea to rest. I’ll make sure they give you an hour.”

“Thanks,” Rachael replied.

8. Collating

Precisely an hour later, a soft knock at the door woke them. “Mr. and Mrs. Burgher? Are you ready?”

The couple locked eyes across the surprisingly comfortable couch that they had sprawled over. After untangling themselves, they sat up and finally responded to the light knocking that had steadily grown louder. “Yes, we’re awake,” David said through the closed door. “Give us five minutes.”

When they emerged, both of them were eager to find out what was going on. They were escorted to an open area on this floor of the building, where a dozen or so technicians were positioned in a large square, their backs to each other, all facing multiple monitors, all clacking away on keyboards or speaking into microphones or whatever. They were introduced to a man in the center of it all. “Mr. and Mrs. Burgher, this is Reese. He’s...well, let’s just say he’s the one who put all this together.”

Reese was tall, and looked vaguely familiar. He offered his hand, and recognition crossed David’s face. “Yes, Mr. Burgher, we met outside the polling place, quite briefly.” They shook, then Rachael exchanged a hand shake as well.

“You looked a little different before,” David said.

Reese smiled. “When I go out in public, I use some stage makeup tricks to break up the normal structure of my face. I change it around every time so that the facial recognition system never gets a good track on me and can’t connect my records into one coherent picture of my actions.”

It was Rachael’s turn to smile now. She said, “I don’t mean to sound rude or anything, but what you just said seems a little...”

“Paranoid?” Reese finished for her. “I know. And it really slows down my shopping to spend an hour putting that stuff on every time I go out,” he paused. “I think you’ll understand more once we show you our end of things here. And hopefully, the information you brought will help fill in some of our gaps. Are you ready?”

“Absolutely,” they responded together. He gestured them over to stand in front of a single large monitor.

“Alright, everyone, let’s start the show,” Reese called out to the army of techies. “Here’s what we know, and have known for a while.” The screen filled with a map of the nation. “Each election cycle since the Political Algorithmic Logic units were introduced to make our decisions, something similar has occurred.”

“First,” he continued, “is the trend that we share with all potential new recruits.” The animation of the country’s voting districts, colored by voting record displayed. It moved forward from the first PAL based decision-making cycle to the present. As before, each cycle showed more and more discrepancies with what the PAL were elected to do.

David interjected. “Yeah, we saw this, but we never managed to get our own version of this together. Any chance you can explain?”

Reese pointed to one of the techies they have not yet met. “This is Kaplan. It’s his simulation that produced the map, so he gets to explain.”

Kaplan nodded as he turned to face them. “I’ll keep this short,” he began, eliciting groans from the other members of the tech team. A glower from him silenced the interruption, and he continued. “This map is the product of two different sets of data. The first is a comparison of their voting records to the platforms of each PAL. The more the vote of each PAL varies from being consistent with the platform it represents, the higher the difference.”

The couple both nodded, and Rachael followed up. “Yes, we sort of got that part. We never managed to get all the way to our map showing it though. We got sidetracked.”

Kaplan raised a hand and interrupted her, leaving her standing with her mouth open. “Sorry, Mrs. B., but that only gets you part of the way to the main map. Remember that each district is represented by multiple PAL units, all interacting to make decisions on issues. So the other piece we needed to understand was how the elected PAL units would work together to represent the population on each of the issues before them.”

Mrs. Burgher turned to her husband. “That’s a really good point. Knowing what they are supposed to do in isolation is one thing, but the system never has a single PAL making decisions.” He shrugged in agreement. “I don’t think we would have been able to deal with that ourselves.”

“Yeah,” Kaplan continued, “most people forget that. So we nudge them after they make a little progress. But we never got a chance to nudge you two along. You found a new pattern, and your attempted action on that triggered a response.”

This time it was David’s turn to jump into the conversation. “But how can you compare what a group of the PAL should decide to what they actually decide? That sounds really hard, unless you build a second version of the PAL system and give them the same problem and watch what happens.”

Kaplan turned from them toward one of the computer screens to the couple’s right, spreading his hands expansively. “And that, my friends, is exactly what we did. We created a tool to simulate how each voting bloc would behave on the issues presented before it. Meet PAL 9000.” He smiled over his shoulder at some private joke that missed the Burghers.

Rachael took a step forward. “But that would take thousands of computational hours! As much as the real system, right?”

“Well, sort of. We found some ways to shortcut the process a little. Actually, it’s really quite clever,” Kaplan stopped in midsentence as Reese’s hand settled on his shoulder.

“Perhaps we should continue with the main presentation, Kaplan,” Reese suggested.

The techie took a deep breath, nodded, and jumped ahead. “But what we found was that none of the districts ended up making decisions consistent with the mix of platforms their PAL units represented. Well, almost none.” The screen shifted, zooming in on a single district. “For example, if we take this region, and the recent education bill, we would expect that the district’s final choice would be to accept the bill entirely.” As he spoke, a complicated looking three dimensional plot appeared next to the district map. A dot moved around, seemingly at random, leaving a jagged path behind it, etched into the screen. “That graph shows how the interaction of the PALs in that district typically evolves on this bill, after simulating thousands of interactions. One axis is the percent of them supporting the bill, and if that ever reaches far enough, the bill passes. The other axes track two other possible decisions they could reach: reject the bill or introduce some additional features to bring a larger segment of PAL units on board.”

They watched as an example of the vote simulation stalled short of the votes needed to pass. Then it suddenly shot out along a new direction until reaching a threshold. It meandered for a short time, then speedily tracked along the “approve” axis until hitting the required level of support. The simulation stopped. “So you see, this

simulated version of things chose to accept the bill after a modification. And in fact, every variation we have tried reaches the same conclusion. They only accept the bill after a modification. In this case, the modification favored seems to be one that shifts funds away from pre-K programs and into a non-educational fund.”

Reese stopped his lecture. “Mr. Burgher, you seem to be confused. Perhaps you have a question?”

Hesitantly, he stepped forward. “But you said that the PAL — as elected based on their platform — should have just outright passed the bill. Why did this simulation not do that?”

“Exactly! This is why we reached out, Mr. Burgher,” Reese replied. “We knew you wouldn’t accept things without proof. And that you would turn that skepticism in both directions. Kaplan, continue.”

“This simulation reached a different conclusion than we expected. And the only way we can find to explain that is if the PAL units in this simulation were modified,” Kaplan continued.

This time, it was Mrs. Burgher who jumped into the conversation. “Modified? By whom? What proof do you have? Did you actually hack the system and find something?”

Before she could finish the barrage of questions, Kaplan stopped her. “No. We haven’t tracked down a specific route for the changes, and our only proof is somewhat indirect. Basically, we ran the simulation over and over, adjusting all their platforms until they collectively reached an outcome that matched what the actual PAL system chose to do in these same circumstances.”

Slowly, David nodded. “So this was a simulation of a modified group of PAL. With different platforms from the ones that were elected.” He waited for the confirming nods of the techie. “So is there any pattern to the way they differ from how they were elected?”

Kaplan turned back to his console, and with a long series of keystrokes, pulled up another image. “Eventually,” he said, “we did this with all the districts on a particular national level bill. And we narrowed down the discrepancies to two aspects.” The screen showed a map with all the districts outlined. Inside each district’s image, a small plot was shown with two axes, focusing in on the first quadrant. In each example, the plots showed two arrows, one red and one white. The white arrows for the districts pointed in just about every different possible direction.

“The white arrows here show the platforms that were elected. Basically, we discovered two issues on the platforms that explain it all. The horizontal axis shows the percent of the PAL in that district who were elected with a 1 for that issue, and the vertical axis shows the percentage whose platforms showed a 1 on the second issue.”

Rachael jumped in. “That explains why the white arrows point every which way. It also explains why the country was never as simple as the old political system and theorists wanted to make it.”

“Indeed,” Reese said. “But I think the red arrows are far more interesting.”

At this, Kaplan picked the presentation back up. “Absolutely right. The voter choices in each district are all over the place. Oddly, though, this education bill was supported by 96% of the districts, and over 85% of them proposed the exact same modifications to it before approval. The red arrows show what had to happen to the PAL units on those two issues in order to get such drastically different results.”

While the white arrows pointed in just about every possible direction, the red arrows showed much less spread. They were not all identical, but they seemed to point within a few degrees of each other.

Mrs. Burgher stepped forward and gently touched Kaplan’s shoulder. “Could you put all the red arrows together on one plot? I’m having trouble comparing them all.”

“I can do you one better, Mrs. B.” Kaplan replied. He entered another series of keystrokes, and the screen to the right of the map cleared briefly, then filled with a single image. The quarter circle shown is shaded in red, fading to very light red at the edges and darkening toward a single line running at about 30 degrees up from the horizontal edge.

“Brilliant!” Rachael said as she moved over to the screen. “So the color intensity shows the distribution of adjustments to the platforms you needed to make to get the results that actually occurred. And most of them needed to be aligned along that 30 degree angle.” She turned back to Reese and Kaplan. “But why don’t you need the same alignment exactly?”

Reese smiled. “I can’t wait until you two are fully briefed and can help dig into this more! The issue here is a single bill that only touches a couple of platform issues directly. But it has secondary connections to several other issues on the platforms. And depending on the exact makeup of the rest of the platforms, slightly different tweaks were needed to bring things into alignment and pass the same modified version of that education bill.”

Both Burghers' eyes lit up as they make eye contact. "That makes sense," Rachael said. "Not to mention that if all of them voted in the exact same inconsistent way, someone would have noticed sooner. So part of this was a smokescreen to disguise the manipulation. Only a full simulation of many possible changes would have shown it. You must have tried billions of possible combinations!" The looks on the faces of the tech team affirmed her statement. "But how? That's more processing power than... anything."

"More important to me than how you did the simulation," David interjected, "is to find out who is doing the manipulating."

Reese and Kaplan exchanged glances. "It's all you, boss," said Kaplan, returning to his console and waiting for things to proceed.

"That, my new friends, is where your investigation helps," Reese said, his tone more serious. "Kaplan, show us the Burgher's map." After a staccato of typing, the screen to Kaplan's left displayed their map, showing the districts in which an extra PAL appeared. "What we are doing now is merging your data with our data." The map evolved backwards in time, a counter in the lower left rolling back to the first PAL election while the map turns mostly white. "We simulate forward from the first election." Reese paused, letting things start moving forward in time slowly. Each district showed an overlay of a light red quarter circle showing the deviation required to get the actual results. At first, these were all a uniform shade of red. But the districts in the cluster with the extra PAL all started to show a marked concentration of red along a single direction. And as more and more districts incorporated the extra PAL, those districts began to show a similar concentration of realigned priorities. When the animation reached the present day, it froze. The room was silent, and David noticed that the map was replicated on multiple screens around the room. Everyone had stopped to watch.

Recognizing the need to present authority, or at least some semblance of leadership, Reese finally said, "Well, that confirms it. What we need to do now..." He never finished this statement, as Mrs. Burgher clapped her hands together once to get attention.

"We're missing something," was all she said. Moving back to Kaplan, she braced herself on both his shoulders. "You've identified the two issues that need to change the most, right?" He nodded, not wanting to speak and disturb her train of thought. "So, what are those two issues? What does the alignment of those issues into similar directions in all the districts actually mean? Are they just random ones that happen to bring this occurrence?"

Her husband picked up the thread. “Yeah, it’s not as if some random education bill is going to pave the way for world domination, is it?”

Reese seized the chance to take back some control of the situation. “Exactly! And Cindy should be almost done with her PAL simulations to help us make sense of this.” A woman across the room from them looked up. She smiled and waved everyone over.

“Alright, everyone. We’ve had a lot of this in the works for a while, but now that we know where this all started and why, we can see what the new PAL is really doing. We’ve been stuck for a while, since none of the results make much sense. But a PAL unit would require at least one additional issue to be added to the platforms or a repurposing of some of the dummy issues used to set the labels for them.” The whole time she had been talking, she’d been typing away, entering a series of commands that resulted in the monitor to her right suddenly displaying what seems to be a tangled mess.

“So,” she said, turning her attention to the mess but not really looking at anyone else, “this is a network of the platforms. To really display it properly, we’d need a hypercube, but I don’t know if it would be harder to make sense of eleven dimensions or just see this spaghetti.” She chuckled, and was clearly expecting a response. After an awkward silence, she picked her monologue back up. “So now we know we need one more platform.” She turned in her seat and entered one more command. The screen split, showing two copies of the network. Addressing the group, she said, “The left one is the original network of platforms. The right one shows the new platform added. That’s the node shown in red here.” Cindy pointed to the isolated red dot on the screen.

“Why isn’t that one connected to the others? And what do the connections among the platforms show us?” David asked.

“Oh, any platforms that only differ from each another by a single issue are connected. Sorry, I thought it was obvious,” she said. “And before you ask, this is the network for the district that first showed signs of the extra PAL. So it only shows the platforms that were elected. And since we don’t yet know what that PAL unit’s platform really is, I left it disconnected for now.”

“Let me guess,” Mrs. Burgher stepped forward to point at the screen, “the size of the nodes shows us the relative number of votes they got?”

Cindy nodded, still not looking at any of them.

David kept going. “And now we can see how a particular decision interacts through the network, right?”

“Exactly,” Cindy said. She turned back to the keyboard. “Let me run this script now.” When she finished, the two networks began to show the results. “What we can see now are which platforms are supporting that education bill. All those in favor of it are shown in blue and their connections are highlighted as well.”

The image of the network on the left showed the blue expanding and receding, shifting around, and eventually spreading to encompass most of the network. The animation in that part of the screen halted, and a simple text box with the words “Bill passed” appeared.

Meanwhile, the network on the right had evolved similarly, but at a much faster rate. It was hard to make out, but flickering lines appeared, connecting the extra PAL to other nodes temporarily. The links among the nodes changed color too quickly to follow. Mr. Burgher closed his eyes. “Um, Cindy, what is going on in that graph? It’s hurting my brain.”

She finally turned to look at everyone’s confused faces. “Oops. I did it again, I guess.” She looked down. “Sorry.”

Reese knelt down next to her. “There’s nothing to be sorry about, Cindy. You’re just thinking a few steps ahead of the rest of us. And we need your help to catch up.”

She raised her eyes slowly and turned to the screen. “Here’s what I set up. Since we don’t know what the platform is for that extra PAL, we have to try all possible combinations. That gives us a huge number of combinations to test. So the script is simulating that same bill against every possible platform.” A few heads nodded. “I just sped the process up so that we won’t have to wait another 25 years for the results.”

Finally, the image stabilized, and the connections to the various nodes were highlighted. “Now we’ve locked in the platform for that PAL, and we can see how introducing it in the other districts affects them. That will take a while. And I don’t think it will be very exciting to watch us all work.”

9. Unexpected Results

The couple exchanged glances, unsure of what to do, when Reese suggested, “Perhaps it would be a good time to eat something?” David’s eyes immediately perked up.

“I guess that’s an affirmative on a meal.” He gestured for them to follow, and they left the large work area for a room on the perimeter with no windows. Cabinets, a refrigerator, counter tops, and a sink lined the walls. A large table filled the center of the room. They drifted into normal, everyday chit chat about their lives while they prepared sandwiches and drinks. But someone watching them would have noticed that the normalcy of it all was infected with a nervousness, sometimes heard in the hesitation before David spoke, or seen in the way Rachael’s eyes twitched when computers were mentioned. Eventually, the awkwardness won out, and all three fell silent, sipping at sodas. Waiting.

David was slowly pushing a few scraps from his meal around, when rushing footsteps approached. A new face poked around the doorframe. “Boss? You guys are going to want to see this.”

“That’s Hugh,” Reese said tersely, standing and turning to leave. He made no attempt to clean up the meal, motioning the Burghers to join them. Hugh led them back to Cindy and the cluster of computers.

Sitting down at his workstation, Hugh started explaining. “So we tried to see how this extra PAL worked and what it did. The only real way to test it was to run simulations of historical bills being considered by the normal, as-elected clusters of A.I. and comparing that to the same situation with the additional PAL added.” He waved his hand at a screen showing two networks with almost identical structures, but the one extra node stood out. As did the vastly different pattern of highlighted links and distribution of colors. “In a lot of cases, the new version didn’t have much effect. It took us a long time to find examples where the impact was really obvious. Then we could backtrack and find other cases. Eventually, we were able to artificially craft legislation that none of the original clusters would support. But legislation that was enacted, without changes, in every single cluster once the additional PAL was introduced.”

He paused, and the two networks reached the end of their simulated debates. The normal network showed not just a simple majority, but an overwhelming majority failing to support the bill. On the right, the modified network showed almost the opposite.

“Now,” Hugh continued, “it doesn’t always get a super majority, and sometimes only ekes by, but those are rare cases. Somehow, this new PAL unbalances everything. It has an opinion on an issue that none of the other PAL even have knowledge of. And so it’s able to drive the debate by connecting to the other areas and manipulating the...”

Reese cut in. “Hugh, I’m sure the details of how this happens are fascinating. But before we dig deeper into that, can you tell us about the kind of legislation that this thing seems designed to help pass? I think that’s more important.”

The excitement from discovering all this drained from Hugh’s face in a flash. Wrinkling his brow, he held out his hand to Cindy. “I’ll let her explain. It’s not really something I really can make sense out of.”

Cindy tilted her head a little, then turned to her computers. Her excitement had ebbed as well, leaving a quieter person. She hesitated, bowing her head.

Reese stepped closer to her. “Cindy. You can do this. And if you share the burden with the rest of us, we can help each other understand.”

The snuffle from the techie surprised both the Burghers. But it was the quaver in her voice that really drove home the seriousness. “Boss, it’s so much worse than we thought.” She typed away, and the screen filled with a simple document, zoomed in so that the print was legible to everyone. The header clearly identified the title and other information about the bill.

Skimming through the document, David saw words like “dissolution” , “government” , “reallocation” , and “internment” . Phrases like “former citizens” and “repurposed biological material” appeared later in the text.

Silence filled the large room until David exhaled, “My god.” He slowly moved to an empty chair next to Cindy. His hand reached out to steady him on the back of the chair, but before he could get all the way seated, his face scrunched up and he rose slowly, looking around.

“What is it, honey?” his wife asked, tearing her eyes from the horrible legislation and starting towards him.

“I must be more tired than I thought. The lights seemed to go dim for a second,” he winced and grunted, then sank into the chair more heavily than he intended.

Hugh looked around. “I saw it, too.” Everyone began looking up at the LEDs distributed around the ceiling of the room. They flickered a few times, then cycled to almost blinding white.

“Crap!” yelled Reese. “The whole system’s may be about to go down. Power must be unbalanced somewhere. Our simulations must have overloaded the grid!” He pointed to a techie across the cluster from them and yelled, “Go!” The skinny man rose and headed for a door marked “Electrical.” But before he got to the door, the dimming of the lights changed into pulsing.

The pattern was almost random — bright, brighter, dim, off, bright, dim, brighter — ramping all over the place. After a few seconds, everyone started to groan. “That is...killing...my eyes,” Rachael stammered out. Shutting her eyes had no effect. The light stabbed right through her eyelids.

“My skull is going to explode!” cried out one of the techs. And the lights sped up their dance. Faster and faster. And each time the light flared bright, the room filled with screams of pain. Everyone pressed their fists to their temples, and their faces contorted with the attempt to close their eyes tighter. But each flash seemed to press them down from above. Slowly, they all progressed from standing or sitting, to their knees, to lying on their sides, to curling into fetal positions. The moaning and screaming was now constant.

Eventually, the lights stopped flickering, held steady for a moment, and went out. But no one was conscious to appreciate the relief. They also did not witness the well armed, well coordinated team in black combat gear enter the room. Their faces were covered with masks. Their eyes were hidden behind goggles. Lights on their helmets swept around the room, but there was no resistance from Deep Purple or their new recruits.