



# Mind Over Ship

**DAVID MARUSEK**

"Exemplary . . . *Counting Heads* was one of my favorite books of last year in any category."

—THE NEW YORK TIMES

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Tor Books by David Marusek

*Counting Heads*  
*Mind Over Ship*



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A Tom Doherty Associates Book  
New York

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To my daughter, Kalina,  
who makes Earth my favorite planet





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# PART 1

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It covers both qualitative and quantitative research approaches, highlighting their strengths and limitations.

3. The third part of the document focuses on the interpretation and presentation of research findings. It discusses the importance of clear communication and the use of appropriate visual aids to enhance the understanding of complex data.

4. The fourth part of the document addresses the ethical considerations and potential biases in research. It stresses the need for researchers to adhere to high standards of integrity and to disclose any conflicts of interest.

5. The fifth part of the document provides a summary of the key findings and conclusions drawn from the research. It also offers recommendations for future studies and practical applications of the research results.

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## The Short Commute

It was a short walk from Mary's suite on the north side of the Starke Manse to the library on the south side. Along the way she greeted Doris maids and Russ security men. The main parlor was closed off—fleece of household arbeiter and carpet scuppers were giving it a thorough spring scrubbing—and she detoured through one of the smaller banquet rooms. A solitary Jerome sat at the head of the long empty table going over house accounts on a dataframe.

"Myr Skarland," he said, nodding to her as she went by.

"Myr Walker," she replied with mock formality.

When she reached the library, Mary was surprised to find no one there. "Hello?" she said to the empty room.

Lyra, Ellen Starke's newly made mentar, appeared at once in her latest persona, that of a plain young woman in a featureless blue smock with a slate tucked under one arm. "Good morning, Mary," she said, her voice burbling with cheerfulness. "I trust you slept well."

Mary knew that the mentar knew that she had indeed slept well, since its job was to monitor everything and everyone on the Manse premises, but she said, "Yes, I did, Lyra. Thank you for asking." Then she said no more and only looked around at the empty chairs.

"Oh!" the young mentar said at last. "I should have informed you of the room change. Nurse Eisen moved the care plan meeting to the atrium because of the lovely weather. I'm sorry."

"No need to apologize, Lyra. You're learning very quickly, but, yes, next time inform me of schedule changes."

Mary took a shortcut through Ellen's bedroom to reach the atrium. Both the bed and the hernando tank next to it were unoccupied. A Jenny nurse was wadding up purple-stained towels from the floor and tossing them into the hopper of an arbeiter. She was a new staffer Mary hadn't met. When she noticed Mary, she said, "We're bathing her."

"Actually, I'm just passing through. Don't mind me."

But as Mary went by, the Jenny's jaw dropped, and though Mary wore no name badge, the taller woman recognized her all the same. "Mary Skarland?"

"Yes, that's me," Mary said and paused to offer her hand. "Good to meet you"—she glanced at the nurse's name badge—"June."

The nurse clasped Mary's hand, but instead of shaking it, she pulled the smaller woman into a full embrace, which was what Jennys often did when they met Mary for the first time. Sometimes they cried a little. To Mary it was odd: not every member of the Jenny germline reminded her of Hattie Beckeridge, but some of them did, and then she cried too. Not this time, though, and in a little while she freed herself and said, "Welcome to Starke Manse, June. We're so glad you could join us."

THE ATRIUM COURTYARD roof had been scrolled back, and the morning sun painted the walls with creamy light. The air was fresh and a little chilly. Three night Jennys sat on wooden folding chairs

alongside Mary's two evangeline sisters, Georgine and Cyndee. Mentar Lyra stood in front of them, posing in what appeared to be a period costume of some sort.

Cyndee had sleep lines under her eyes, but she smiled at Mary and patted the empty chair next to her. "What's this?" Mary said. "A fashion show?"

"We told her she had to lose the blue smock," Cyndee explained, "and this is what she's come up with so far. What do you think?"

"Yes, Mary," Lyra echoed, "what do you think?"

In place of the smock, the mentar's persona wore a lavender blouse and short black skirt with a light jacket in dusky plum brocade. On its feet were simple black suede open-toed slip-ons.

"Hmmm," Mary said, looking her up and down. "Understated, elegant, professional. Granted, it looks like two hundred years old, but I like it, Lyra, and I give it my unqualified stamp of approval."

The mentar beamed. "Thank you, Mary."

"Wait. Hold on," Mary said. "You're not finished, are you? Where's the hat to go with that outfit?"

"Yes," chorused the jennys. "Show us the hat."

The young mentar said, "I have been studying the history of hat design, and I believe I have fused several popular styles into an original one."

"And?"

But the mentar hesitated and had to be coaxed into showing its hat to them. When the hat appeared on Lyra's head, the jennys gasped. The mentar's design was a complicated wad of velvet ribbon liberally sprinkled with tiny silver pine cones, rosebuds, and acorns. The brim turned up in the front like the prow of a ship, and from its bowsprit sprang a golden sprig that dangled three freshwater pearls. From the rear of the hat protruded a fantail of pleated felt, like the rear end of a turkey.

"Hmmm," Mary said. "Hmmm."

"Hats are the *hardest*," Lyra complained.

"Oh, I know it," Mary agreed. "What do *you* think about your hat?"

Lyra glanced at the jennys. "I *like* it, but I wouldn't want to appear ridiculous when I wore it."

"I don't blame you. No one wants to appear ridiculous. Maybe our friends can make some suggestions how to fix it?"

"All right," Lyra said.

At once the jennys and Georgine and Cyndee seized Lyra's design and cloned it multiple times into the air, editing it with ideas of their own. They tried their creations on Lyra and on each other and then picked apart the results. The mentar delighted in their attention.

Mary said, "Remember, Lyra, in the end it's up to you to decide what you'll wear. That's a cardinal rule of personhood. You may end up liking your original design best of all, and if you do, you should stick with it. How you feel about yourself is much more important than the opinions of others, and with enough chutzpah, you can pull off any hat you like."

Just then, a door opened and Dr. Lamprey came in, followed by June and another jenny from day shift, as well as the head nurse, Eisner. The dozens of hats vanished.

"Oh, good," the doctor said, "you're all here." There were no more seats, and one of the jennys offered him hers, but the doctor said, "Sit, sit. I've got legs too." He paused a moment to gather his thoughts. "Now I know some of you are going off shift, so I'll keep this brief. The reason I asked you here—" He stopped and looked around the atrium. "I don't see Ellen's guardian."

"I notified her," Lyra said. The young mentar continued to wear its period work ensemble, but without the hat.

"Maybe she forgot," the evangeline Cyndee quipped, and the jennys snickered.

Cabinet appeared in front of the doctor, startling him. It wore the persona of an elderly woman. “Yes?” it said.

“We’re having a care plan meeting, as I told you not ten minutes ago,” said Dr. Lamprey, “and we would appreciate your attention.”

“Certainly,” said the old mentar, who promptly disappeared.

Dr. Lamprey frowned but continued. “Let me just say that the quality of Ellen’s care continues to be excellent, and you are all to be commended. Likewise, Ellen’s physical progress remains strong. Her physical growth continues to catch up on her early deficits, and I have no remarks to add along those lines. What I want to concentrate on”—and here his voice deepened—“is her psychological recovery.”

The mood in the room changed. The jennys all looked at their hands. “Yes, I see you’re aware of what I’m talking about,” he continued. “With injuries so grievous, it’s a minor miracle she survived at all, and the experience has taken its toll. Ellen lost a significant mass of brain tissue, especially in her motor regions and cerebellum. To compensate, we’ve ramped up her brain’s own neuron-generating process, and new tissue is replacing the lost. It helps that her entire body has been replaced, which has provoked the whole region to rewire itself.

“What I am concerned about is the damage done to her prefrontal cortex. While not extensive, it’s not as easily repaired as the motor regions without a permanent effect on her psyche. Not to be too graphic about it, but her head was literally plucked from her body by the force of the impact. Her safety helmet saved her brain, but it could not mitigate the sheer brutality of the experience. It leaves indelible marks.

“That being said, the human mind is a resilient organ, and early signs lead me to believe that Ellen’s personality will reemerge essentially the same as before the accident. However, there is always the danger of unexpected complexes developing, and that’s what I think we’re seeing now. I’m referring specifically to her recent delusion that her mother is still alive.”

It was a problem that Mary had, in fact, been the first to report. Oblique references to her mother in many contingency plans led to assertions of her survival. It had been going on for several weeks and was becoming more pronounced.

“We cannot ignore this,” the doctor continued, “especially now when new networks are being established. Keep in mind that the neural circuits used most frequently become the strongest. You might say they increase their own bandwidth with usage. If we don’t deal with this delusion now, it may become literally engraved in her prefrontal cortex and link up to other neural regions that eventually hijack her entire personality. It’s better for us to be proactive.”

The doctor paused a moment for the gravity of his words to sink in. “Here’s what we’re going to do. Last night, I explained the situation to Ellen, and with her permission, I infused the regenerative medium in her hernandez tank with a drug called Protatter. When activated, this drug dampens neuronal firing. When we dampen a circuit often enough the brain thinks the circuit is unnecessary and prunes it back. So, this drug, in effect, can erase memories. We have to be careful which memories we erase, and we’ll proceed in a very conservative manner. Ordinarily, I would rely on a patient’s guardian mentar to control the dampening, but”—the doctor looked around the room and shook his head—“Ellen’s guardian seems to be having cognitive problems of its own, and her new mentar”—he nodded at Lyra—“may be a little young for such responsibility. Therefore, you, Ellen’s nurses and companions, will have to do the job.

“In order to tell Protatter which circuits to dampen, we need to listen very closely to everything Ellen says, and every time she expresses her delusion we tag it. For this I’ve supplied Nurse Eisen with clicker devices.”

The jenny held up a small plastic disk for the others to see, and the doctor continued. “Press the button for as long as she talks about the idea that her mother is still alive, then let it go. Don’t press it if she mentions her mother in any other context. We don’t want to erase all memory of her mother. Only press it when she expresses a belief that her mother is alive on this Earth. Don’t be concerned if she says she’s in heaven or otherwise spiritually alive. And don’t worry about making a few mistakes along the way because it’s the cumulative total of hits that will have the effect and not any individual error.”

## Office Hours

“She’s waiting for you,” June, the new jenny, told Mary.

“I’ll spell you when you’re tired,” the evangeline Georgine said.

“Don’t forget your clicker,” Nurse Eisner said.

Mary waved them all away and gently shut the heavy Map Room doors behind her. Ellen lay in a parallelogram of sunlight on the carpet beneath the window. Mary crossed the room soundlessly and loomed over the drowsing baby/woman. Ellen’s body was that of a healthy sixteen-month-old toddler. She was dressed in a plain, pea-green eversuit that left her fat arms and legs bare. She wore pea-green booties. Surrounding her neck was the large, horseshoe-shaped brace that helped support her adult head. Or, rather, that helped the head support its baby body.

It was Ellen’s original head, the one she had been born with. A safety helmet had swallowed her moments before a devastating space yacht crash had obliterated the rest of her. It was a head that was a bit rattled still. It was covered with all-new baby skin, smooth and flawless. New button noses and comically small ears.

Mary moved into her light. “Mary?” the adult head said, blinking and yawning.

“Yes, good morning, Ellen. It’s me.”

The baby raised her arms, and Mary picked her up, mindful to support the ungainly head. She carried her to the huge chairdog that was crouching in the corner, and the window followed them along the wall.

“No, window,” Mary scolded. “Go back where you were.” The window fled back across the wall, and Mary lowered herself and Ellen into the chair-dog. The chairdog stretched and scooted to balance their weight until they were perfectly comfortable, but then Mary remembered the clicker, and she had to lift Ellen to search her pockets for it. When they were resettled, Mary said, “Sleep well?”

“No, Mary, I did not.” Ellen’s voice lacked the force of adult lungs. “I kept waking up feeling I was drowning in that *fucking tank*! I want to sleep in a *real bed*, but they won’t listen to me. Can’t you make them listen to me?”

“I’ll mention it,” Mary said. “But you and I both know what they’ll say: the tank is best for gaining weight and growing bigger.”

“But they’re wrong! I know they are. They listen to you, Mary. Promise me you’ll speak to them.”

“I promise. Now, what’s on the agenda? You told Cyndee you wanted to work today, so what needs to be done?”

“Oh, Mary, there’s so *much* to be done, more than can fit into one lifetime, and it just *keeps piling up!* I don’t know how I’ll ever get out from under it all.”

Mary gave the baby a little squeeze. “Don’t worry so much. Just slow down and take it one thing at a time. What should we tackle first? Lyra, what do you have to get us started? Make it something easy.”

The mentar appeared in the room in her new clothes and pulled the slate from under her arm. “Libby from the Department of Justice is standing by with a briefing on their investigation into your mother’s death.”

*Lyra!* Mary said silently. *Weren’t we in the same care plan meeting a few minutes ago?*

The young mentar quickly added, “But Clarity wants to speak to you first.”

“Well, I don’t want to speak to her. Send Libby in.”

Mary shot Lyra a look of disapproval and added, “Make it voice only, please.”

The official UDJD seal appeared in the center of the Map Room and faded away. The disembodied voice of the government mentar said, “Good morning, myren. Since our last update we have uncovered an important new lead. Forensics has identified a data burst transmission to the *Songbird* the moments before its avionics malfunction. While we have poor odds of ever recovering the contents of this burst, the fact of its existence is one more piece of evidence that the avionics subsystem may have been sabotaged. In other words, evidence that the ship’s failure was not accidental.”

Ellen was silent for a long moment, and Mary readied the clicker. Ellen said, “I don’t understand. Kindly boil it down for me, Libby: Have you found my mother?”

The government mentar paused, and Mary wasn’t sure if the statement qualified as delusional. “I’m sorry,” Libby said, “found your mother? The whereabouts of your mother’s remains were never in doubt. The news I am imparting speaks to the question of whether your mother’s death was a homicide or an accident.”

Ellen corrected the mentar. “*Attempted* homicide, don’t you mean? How can you have a homicide if you don’t have a body?” There it was, the delusion, but when Mary tried to press the clicker, she found that she couldn’t do it. Dr. Lamprey’s explanation had sounded good, but Mary couldn’t get over the image of reaching into Ellen’s brain and pinching off a neuron.

“Her body was destroyed in the crash,” Libby replied. “The coroner has positively identified bodily residues collected at the crash site as belonging to Eleanor K. Starke. Her death is not in doubt. Do you have evidence to the contrary?”

The baby squirmed in Mary’s lap and kicked her legs. “Do *you* have any evidence besides ‘residues’ that she’s dead? She’s alive, I tell you! You should concentrate your efforts on finding her instead of making excuses!”

This time it was unequivocal, and Mary steeled herself and gave the clicker a good solid click. Meanwhile, she began rocking the baby in her arms. “Libby,” she said, “please give your report to Lyra and excuse us. Lyra, cut the connection.” The government seal reappeared briefly and faded away, and in a moment the chairdog aped Mary’s motion and began to rock both her and Ellen.

When Ellen settled down, she said, “I’m sorry, Mary. It’s just that I get so angry sometimes.”

“Perfectly understandable. No need for apologies.”

“No one believes me,” the baby went on, “but I know I’m right.”

Mary hesitated, then gave the clicker a quick squeeze. She looked imploringly at Lyra, who said, “Ellen, Clarity’s been trying to reach you for a week now. Shall I connect her?”



“No!” Ellen said. “I don’t want to see her!”

“Are you sure? She says it’s important.”

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“That’s what she always says.”

Mary said, “Let’s move on. What else do you have, Lyra?” but Ellen changed her mind.

“Let Clarity in. I do have something to tell her.”

Clarity appeared on the opposite end of the room, took a moment to orient herself, and zoomed over to hover over the chairdog. Her holospace was roughly cropped and revealed scraps of her office around her. She opened her mouth to speak, but when she actually looked at her business partner, she laughed instead. “Honestly, Ellie,” she said, “you should see yourself. We should do a character like you. Maybe use Alison’s head.”

The remark took Ellen off guard. “What?”

“That big neck brace of yours is like an adapter plug. We could use it to screw different heads into your body. We could mix and match our characters.”

“Very funny,” Ellen said.

“I think so. I think it’s a riot. What do you think, Mary? We could call it the Amazing Modular People or something like that. Use it to recycle some of our less popular characters.”

Ellen waved her small arms to cut her off. “Will you quit that already? I have something important to tell you. And please sit down. You’re giving me a headache having to crane my neck like this.”

“Yes, of course. Just a sec.” Clarity vanished for a moment, and Mary nudged the chairdog to quiet rocking. When Clarity reappeared, she was seated in an office chair.

“Thank you,” Ellen said. “That’s better. Listen, Clarity, my friend, I’ve been doing a lot of thinking lately, and—”

“Uh-oh,” Clarity said with a wink at Mary, “when she starts thinking, look out.”

“And I want to leave Burning Daylight.”

Clarity opened her mouth, then shut it.

“I’m serious,” Ellen went on. “I’ve lost all interest in producing holonovelas and sims. All of that seems so trivial to me now. Also, I know I haven’t been pulling my weight for some time, and it’s not fair to you.”

Clarity frowned while she considered a response. Finally, she said, “You’re not thinking straight, Ellie. You’re still mixed up from your accident.”

Ellen’s reaction was explosive. “It was no accident!” she shouted. “Will everyone please get through their skulls that it wasn’t an accident! Even the fecking Justice Department knows it was a deliberate attack!”

“Sorry,” Clarity said. “I meant to say your attack.”

“I’m serious, Clair, I want out! The sooner the better!”

Clarity looked stricken. “But why? You love the business.”

“Not anymore. Besides, I have no time for it. All my time is taken up doing my mother’s work.” Mary heard the word “mother” and readied the clicker. “At least until she returns.” Click.

“Say what?”

“My mother’s hiding out somewhere.” Click. “She’ll come back when it’s safe.” Click.

Mary decided that they’d had enough and said, “Clarity, maybe you can continue this discussion tomorrow. We’re late for Ellen’s nutrition break.”

“All right,” Clarity said uncertainly. “We’ll table the matter for now. We’ll talk about it when you’re better.”

“That won’t make any difference,” Ellen said, but Clarity waved good-bye and vanished. The door

opened at once, and June led a cart into the room, and in its wake came the aroma of baked apples and cinnamon.

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“Snack time!” June sang in a perfect expression of jenny enthusiasm. She spread her fingers at the window to enlarge it, then opened the cart’s high chair and reached for the baby.

But Ellen resisted. “I’m not hungry,” she said and crossed her arms.

“Oh, we’ll see about that,” June chortled. “No one can resist apple strudel fresh from the oven!”

“Just watch me.”

Mary leaned over to whisper in Ellen’s undersized ear. “How can I ask them to let you out of the tank at night when you refuse even to eat?”

The baby took a moment to ponder this, then sighed and uncrossed her arms. “I can resist the strudel, nurse. It’s Mary I can’t resist.” She raised her arms for June to pick her up. “I’ll eat, but I’ll feed myself. Is that clear?”

The young nurse laughed. “Yes, myr! You’re the boss!”

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## Applied People—Warm Puppy Report

Zoranna Alblaitor spent a restless night in her Telegraph Hill home. When she awoke at one end of her sprawling Lazy-Acres bed, her mentar, Nicholas, was sitting next to her dressed nattily in a morning suit. “Go away,” she sniffed. She turned her back to him and pulled the covers over her head.

“We have a big day ahead, Zoe, beginning in about half an hour.”

“Use a proxy,” said her muffled voice.

“I would if we had any fresh ones.”

“Cast me.”

“I could, but then I’d have a grumpy, half-asleep proxy.” His argument had no effect on her. Not even the arrival of coffee and toasted bagels moved her. “I know what you need,” he said, “a Warm Puppy Report! Uncle Homer, where are you?” At once a long-haired blond chow chow puppy appeared in the middle of the vast bed dragging a ratty towel behind it. More fur than dog, the large puppy noticed them and, dropping the towel, galloped over on oversized paws. It leaped upon Zoranna and tried to root under her blanket. But she wore no vurt gear and could not feel it. The puppy gambolled back to its towel and seized and shook it with mock fury as though to break its neck.

“It looks healthy enough,” Zoranna said, peeking out from under the covers.

“Yes,” the mentar agreed. “It’s modeling the 75.2 million of our iterants who are awake and active at this time. Overall, they’re feeling fat and happy and well employed. Even frisky.”

“I hear a ‘but’ coming.”

The puppy discovered the young man still sleeping on the far end of the Lazy-Acres and dashed over to check him out.

“So, how was last night’s conquest?” Nicholas asked, changing the subject.

“Tireless,” Zoranna said. “As if you didn’t know.”

“And how would I know?”

“Get off it, Nick. I felt your presence. You were riding me last night. Don’t deny it. In fact, I think you enjoyed him more than I did.”

“Does that bother you?”

“Not yet, but I’ll let you know.”

The puppy came bounding back to them, but halfway across the bed it yelped and stopped. It sat and began to lick one of its hind legs. “There,” Nicholas said, “that’s what I wanted to show you.”

“What is it, baby?” Zoranna said, enticing the puppy closer. Uncle Homer returned to them wagging its whole rear end, and tried to wash Zoranna’s face with its tongue. “Make it vurt,” she told Nicholas, and a moment later she could feel the dog’s slobbery tongue and manic energy. She caught it in her arms to make it still and rubbed it behind its ears. The puppy felt so soft and warm—so real—as though Zoranna were wearing full vurt gear. If her mentar could ride her world, she could ride his.

“I think the Londenstane case is the problem,” Nicholas said. “The trial concludes next week, o

employees fear the verdict, and their stress is being translated as muscle cramps.”

“Poor baby,” Zoranna cooed. “Mommy is worried too.”

The dog melted away in her arms, and Nicholas said, “Now that you’re awake—”

“Give him back.”

“Later. Andrea Tiekkel will be here in ten minutes.”

“Garden Earth business?”

“Apparently not.”

“Then what?”

“She wouldn’t say, except that it’s important.”

Zoranna dragged herself out of bed. In the bathroom, the large, softstone spa was filling with water. Zoranna considered the shelf of colored bottles and jars over the cabinet and chose Deep Forest from Borealis Botanicals. Borealis Botanicals was one of Saul Jaspersen’s companies. She despised the man but loved his line of all-natural toiletries. She spilled a handful of crystals into the surging water, releasing a musty, sweet cloud of steam. Slowly, she lowered herself into the fragrant brew. When she had made herself comfortable, she closed her eyes and said, “Ready.”

Her mentar opened a familiar lounge holoscape where she liked to conduct meetings. She glanced down and saw that she was wearing a dark business suit. She was seated in a blue-black leather armchair, and Nicholas occupied the one next to her.

ACROSS THE BAY in Oakland, Andrea Tiekkel floated in a hernandez tank in a windowless basement room of her hillside house. She had not left the tall glass cylinder of bubbly green broth in weeks, and though she was constantly bathed in its wholesome chemicals, she continued to waste away. Her wispy hair drifted like seaweed, and her teeth were loose in her jaw.

*Are you still up for this?* her mentar asked.

Andrea belched a stream of curdled vomit, which was quickly absorbed by the fluid. *I’ll manage,* she said. *The time is right.*

*Yes, she’s vulnerable now. We’ll proceed, and we’ll try to make it brief. We’ll provide you a probability sidebob sim of her for comparison. We’ve never had the opportunity to model Zoranna’s personality in one of our preffing suites, but we have high confidence in the accuracy of this sidebob construct. Nicholas says they’re ready. Here we go.*

A moment later, Andrea Tiekkel was sitting in a parlorlike space. Her persona was a healthy version of herself, fit and full and flush with color. Opposite her, Zoranna Alblaitor sat at ease next to her mentar, Nicholas, who wore his usual rakish persona. Between Zoranna and Nicholas, and invisible to them, stood Zoranna’s sidebob, wringing its hands anxiously, belying Zoranna’s apparent calm. Yes, this was the right time to strike.

Nicholas spoke first. “Welcome, Andrea. Nice to see you outside the boardroom. Is E-P here too?”

“Yes, we are,” said the mentar’s disembodied voice.

“Wouldn’t you care to join us in the visible world?” Nicholas gestured to the empty armchair next to Andrea’s.

“Actually,” E-P replied, “we don’t use a visible persona.”

“Is that so?” Zoranna said. “What about that quicksilver Everyperson I see everywhere?”

“That’s our E-Pluribus corporate logo,” E-P said. “That’s not us. But if you insist, we sometimes use this marker.” An icosahedron, like a ruby pineapple, appeared floating over the empty chair.

“Splendid. Thank you,” Zoranna said and turned to Andrea. “Now, what’s the purpose of this?”

‘urgent’ meeting?” Though she seemed disinterested, her sidebob leaned forward to catch Andrea’s reply.

“It’s actually pretty huge,” Andrea said. “When my dear aunt Andie died, she left me E-Pluribus and an impressive investment portfolio. I’m currently rebalancing this portfolio to better suit my own interests. As part of this process, I would like to purchase Applied People.”

“Excuse me?”

“I want to buy you out.” Andrea sat back to watch Zoranna’s reaction.

Both Zoranna and her sidebob seemed surprised. The sidebob said, *What’s this all about? Is she serious? Do I want to sell? Does she know something I don’t?* At the same time, the real Zoranna’s eyes darted this way and that as Nicholas, no doubt, poured counsel into her ear. After a few beats Zoranna regained her composure and said, “How fascinating! Tell me, Andrea, shouldn’t the owner of the largest preference polling company in the world know that I have no intention whatsoever of selling Applied People?”

Zoranna’s sidebob, meanwhile, had changed. It was now lying on a massage table, and a second Nicholas was feverishly kneading its neck and shoulders. Andrea smiled at the image. “Yes, of course,” she said. “I know your feelings about your company, but with the help of E-Pluribus, I am able to play my cards several shuffles ahead.”

“What exactly does that mean?”

“It means that I know probabilities which tell me that things will go very poorly for Applied People in the next few months. Within a year, Applied People will be worth next to nothing and be teetering on financial collapse. I say this in all sympathy. I’m not gloating or trying to take advantage of an unfortunate situation. In fact, rather than waiting until the bottom drops out, I’m here now to make what I consider to be a generous offer.”

Nicholas interjected, “Just how generous?”

“Eighty-two UDC per share.”

That was generous. Better than twice full value.

Zoranna said, “If you really mean to be generous, then you’d fill me in on the nature of this unfortunate situation that E-Pluribus foresees. Then Nick and I might have the opportunity to do something about it and save my company.”

Meanwhile, her sidebob was saying, *Is it the Londenstane trial? Does she know the outcome? O my God, the court is using an E-Pluribus jury! Did she rig it? Are we doomed?* The sidebob was no longer on the massage table but in bed clinging to Nicholas like to a lover.

Andrea lingered over this image, then turned to Zoranna and said, “As you wish, I will tell you. There’s a near certainty that Fred Londenstane will be found—innocent.”

With a brave face, Zoranna said, “But that’s good news!” Her sidebob, however, cried, *We’re ruined!*

“Actually,” Andrea went on, “it’s not good news, at least not for your business. It would be far better if he received a life sentence and was locked away forever. Out of sight, out of mind. But instead he’ll be constantly in the public eye, a permanent reminder of his clone fatigue and a gadfly upon your whole organization.”

*There’s no such thing as clone fatigue!* raged the sidebob. *It’s a myth, an urban legend. It’s not real and we have the science to prove it.* Calmly, Zoranna said, “That’s a cynical statement, Andrea, considering we’re talking about a living human being here, but I see your point. Tell me, how can you be so sure of the verdict? I mean, I thought that as soon as E-Pluribus releases jury sims to the courts you have no further contact with them.”

“That’s true, we don’t. But don’t forget, we still have the original sims in our database. If we expose them to the same testimony as presented in court, we can determine how they’re likely to respond to it. In any case, I’ve made my offer. I don’t expect an immediate reply. I’ll leave it on the table for now, but the per-share amount will drop appreciably with time. Now, if you’ll excuse us.” She rose to leave.

Zoranna also rose. “Thank you for dropping by,” she said, but her sidebob was curled up in a trembling ball of nerves.

*THAT QUITE WORE me out, Andrea said, once again in her warm, dark, syrupy tank.*

*Yes, we see that, E-P replied. You’ll have a rest break before our next meeting, but tell us, any insights to share?*

*Were you able to move any furniture into Nicholas’s realm?*

*No, his security was too alert. Why do you ask?*

*There’s something odd about their relationship. Not your usual human/mentar sponsorship.*

*We’ll look into it. Anything else?*

Andrea reached out and touched the glassine side of her tank, caressing its smooth surface with bony fingers. *Yes, one more impression. She’s a sensuous person. Tell me, what brand of body oil or skin cream does she prefer?*

*Borealis Botanicals.* After a moment, E-P said, *Yes, a fine vehicle. We’ll look into that as well. No rest, dear.*

*One more thing. I feel my time is near.*

The mentar paused a moment, and then it said, *We’ll place the order.*

*Thank you.*

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## Replacement Order

The order rumbled throughout the underground facility, rousting subunits by the score from the child slumber of standby status. Subems diagnosed both themselves and their component machines. Motors whirred, pressures rose, and instruments self-aligned to nano-tolerances. Several million jiffies later the controlling midem declared the laboratory fully operational.

At once, all three stitching chambers prepped themselves with skeletal scaffolding blanks. The print heads chattered to life. First they laid down the bones, building them from organic feedstock at 4096 molecules per stitch, a thousand stitches per second. Then they dressed the finished skeletons with organs, printing them in place. They knit muscle fibers, entrails, circulatory lines, nerves. They constructed hearts already containing the blood they would soon pump.

Seventy hours later, the stitchers went off-line, the chamber doors opened, and the print run was removed, still cold, to the bonding bay. The bay was a small space where the raw bodies could continue their internal assembly undisturbed for another forty-eight hours. Then medbeitors wheeled the bodies into the “delivery” room where they were jolted to life.

Only two of the Andreas passed inspection. The third exhibited a faulty nervous system and was handed off for sanitary disposal. The lab midem sent a fulfillment notice up the chain.

## Total Body Makeover

Oliver TUG browsed the Thievery Gallery of the Persuasion Channel for their new interviewee. Thousands of postage-stamp mug shots were no help: one brutalized face looked much like another, and there were so *many* of them. Oliver searched manually by dates and key words and after a few passes found the kid. The banner over his mug read, “WRECKER,” and the Ransom/Reward link below read, “He stole from us, and we want it back.” The thief, himself, looked to be about twelve years old, but he was a retroboy. He was a member of a gang that had caused a TUG moving and storage van to crash and then stole its contents before the traffic police arrived. At least, the TUGs assumed this retroboy was a wrecker. They had scant evidence, the boy hadn’t actually copped to anything yet, and no one had offered to ransom him.

As it happened, the moving van in question had contained ordinary house hold goods, not some

more sensitive cargo, but that was beside the point. No one should get the impression that they could mess with the TUGs and get away with it.

Oliver pointed at the boy's mug, and the frame expanded into a life-size hologram of the impromptu interview room. The room was actually a nitproof tent they had constructed in a very secure warehouse. They had delivered the boy to the tent in a nitproof bag. As far as the police were concerned, the boy fell off the grid in a public null room in Oak Park, halfway across the city. In the tent, the boy was lying on a tarp, and his legs were shackled in makeshift stocks.

Although the Persuasion Channel provided its amateur interviewers triple anonymity, Oliver walked through the holospace searching for any inadvertent clues that might give his charter away to the authorities. The only agent in the tent was a generic house hold arbeitor. It was busy painting the soles of the boy's bare feet with an organic solvent that caused the skin to liquefy and slough off. The exposed nerve endings on the soles of his feet looked like the stubble of a white beard.

The boy was already crying and pleading, which made Oliver shake his head in wonder. The solvent didn't actually hurt, and if the boy made this much fuss so soon, how would he hold up when the arbeitor broke out the hair dryer?

Oliver's comlink buzzed. "Prinz Clinic called," said a subordinate. "Veronica is out of recovery." "Thank you," Oliver said, wiping away the holospace. "Get my car."

A PHALANX OF three tuggers preceded Oliver TUG through the surgical wing of Prinz Clinic. Each of them stood over two meters tall and measured twice the girth of human standard. Clinic workers and machines hugged the walls to let them pass. The TUGs wore military-cut jumpsuits, and over their left shoulders floated the olive-and mustard-colored marble of their charter logo.

At the door to the private room, Oliver told his detail to wait in the hall while he went in alone. Although he must have known what to expect, seeing her for the first time was still unsettling. She looked the same as before, only smaller. Much smaller, a half of her previous mass. Her head was shaved, but it had the same jar-shape, with flattened nose and pronounced chin, that characterized their charter. She looked like a miniature version of herself.

Oliver TUG told the medtechs in the room to vacate, and they seemed only too glad to comply. Then he drew himself erect, looking even more imposing, and said in a gravelly voice, "Veronica TUG of the Iron Moiety, on behalf of the Supreme Council of Moieties of Charter TUG, I am compelled to deliver an official notice of reprimand. Your recent body mods run counter to TUG regulations, causing harm to yourself and serving as encouragement of aberrant behavior to others." As he said this, he gave her a secret wink. "Furthermore," he went on, "continuation in this manner will result in a serious penalty, up to expulsion from the charter."

Veronica seemed unperturbed by the solemn pronouncement. When Oliver stopped talking, she said, "Finished? Then come here and give us a hug."

Oliver scowled, but he crossed the room and leaned over her bed to gently pat her shoulder. Still using his officious tone of voice, he said, "We're all concerned about you, Veronica. Your moiety is both ashamed and worried. Won't you even consider undoing this great harm?" As he spoke, he made a fist and pressed his knuckles against her shaved skull for a good bone-to-bone connection. *Bad news, Vee*, he said. *All the latest mentar shoots have failed the isolation stress test.*

*All of them?* she replied through her skull. He nodded, and she said, *They raptured?*

*That's what it looked like. We have to rethink this whole thing. We're getting nowhere. We should call in a mentar specialist.*



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