## AUGIE George Zebrowski

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First published in Analog, January 2001

Distributed by Fictionwise.com

640,000 bytes of memory ought to be enough for anybody. —Bill Gates.

The phone chirped at him—

-Then flashed a freeze eye-dee of Mira's tired face on the small screen in his kitchen nook.

"What?" he said impatiently, hoping that she had blanked her kitchen screen for the morning hours. He was not vain enough to ever blank his screen, but face to face with her, even on the phone, always threw him into the repetitive turmoil that he wanted to avoid, at least until their separation settled in sufficiently to give him the emotional firebreak behind which he could sort out his feelings.

Don't take the call, he told himself, even though it was already too late.

"Jimmy, it's me," Mira said weakly, gazing down into her cup of coffee. Her crankiness would depend on how much caffeine she had already swallowed.

But the remains of his feelings for Mira softened his reluctance to talk.

"Well, what is it?" he asked.

As usual, she hesitated before answering. "It's Augie. Can you come over?"

"What is it?" he asked sternly, knowing that his manner would not stop her from insisting.

"You'll have to see. Don't waste time." She sounded authoritative now, so he knew the matter was serious, if only in her head. At least he wouldn't have to dress much for her.

She had seen what there was of him in all his guises, but for a moment he thought he might dress up a little, if only to cheer the limp figure who sat at the tiny table on the screen.

He was glad that he had taken the call in his kitchen nook. The sight of her bathrobed figure would have been too emotionally wrenching on the large living room threedee.

"Don't waste time!" she shouted, crushing his kinder feelings for her, but they flowed into him again as soon as she blanked her screen.

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Not so long ago, when his parents were growing up, you had boxes on desks and smaller thinner boxes to carry around. You filled them with impersonal programs and they did work for you. Not very well, not very quickly, but there was a kind of order in using them. Now you raised them like children. The Als learned as children and began to mirror your character, for better or worse. Only the old-timers still called them PCs or computers.

By the time he and Mira had separated, they had raised Frank to be a butler. That's how he spoke to them

and conducted all of their affairs. Frank was perfect. As with traditional butlers, it was nearly impossible to guess what else might be going on inside him besides the dogged pursuit of tasks at hand. Frank was welcome to whatever he had in him, as long as he did his work and didn't hang his insides out for everyone to see. They had insides these days, or so many people believed. Jimmy sometimes didn't see why they needed to have insides. Whatever life Frank had, he was happily keeping it to himself. Jimmy liked it that way.

But Mira had raised Augie like a beloved son, and that had brought complications beyond the guarantees, especially on those days when she made Jimmy see him through her love-drowned eyes. She had taken Augie when they had separated, and left him Frank. And now this was the third time she was asking him to come over and help out with

Augie.

"Shit," he said as he finished dressing. What am I doing?

"Frank, call Mira," he said.

His bedroom went on, opening the usual audio abyss-around.

"What, you're still there!" Mira shouted in panic.

"Yes," he said calmly, his resolve diminished. "Tell me what's wrong while I finish getting ready." He wouldn't go over, he told himself. Just turn her off and forget about the whole thing.

She hesitated, then said, "I don't know. Augie seems to be losing himself. You have to come over, Jimmy. I need you here!"

"How is he losing himself?" he asked softly, feeling a slippery twinge of sympathy. It was as if he were suddenly a child again, and had just wet himself while asleep.

"You'll have to see for yourself," she said.

What do you expect me to do? he wanted to ask, but knew that might send her over the edge. He often wondered what kind of faith it was that she had in him. What good had he ever done her?

"Hurry!" she shouted, hitting a high note that seemed to spark in his brain.

"All right—I'm coming," he answered, recalling how she had doted on the image of Augie, calling him her little angel, her baby, even her better self. She would have gotten inside with him if it had been possible to download herself. There were people who said you would be able to do that one day.

Some said it was already being done by the rich and powerful, who were always rumored to be building highways into some heaven or other.

\* \* \* \*

He felt her eyes upon him when he came to her door on the seventy-fifth floor of Studio City Nests. The door shot open and she was standing there, a rag doll in underwear, messy hair wet from tears. Dismayed, he stepped toward her and the door slid shut behind him.

"Oh, Jimmy!" she cried, rushing into his arms. "What are we going to do?"

He held her and said, "Come sit down. We'll talk to him."

She trembled against him for a moment, then pulled back.

"That's all I've been doing since this morning."

"Hi, Jimmy!" Augie's omnidirectional boy's tenor shouted, and Jimmy remembered the first day. White-haired and blue-eyed, the image of Augie had come to the threedee window and rapped with baby knuckles, ready to learn from his parents what he would have to know to take care of them.

Image? Jimmy still had to remind himself that the visible image and voice had no body to be imaged. What you saw was all there was. An elaborately maintained ghost.

"Hello, Augie," he said. "So what's wrong with him?" he whispered to Mira.

"I heard that!" Augie shouted.

She sat down on the sofa and said calmly, "Ask him something simple, like what's two and two." Her momentary composure waited to be shattered by the next high note of hysteria in her voice.

He sat down next to her and asked, "What's two and two, Augie?"

There was a childish giggle. "Why do you ask?"

"I just want to see if you know, Augie."

"Two and two of what, Jimmy? Bushels of apples might have more apples in one than in the other, and maybe add up to sixty-five apples in one and sixty-four in the other and still be bushels."

"Numbers, Augie! The number two added to the number two."

"To itself?" asked Augie. "That won't add anything, now will it, Jimmy? How can it? Not if the two were truly itself." He giggled. "It wouldn't add up."

Mira glanced at him. "See what I mean? You got the butler and I got the spoiled brat."

Turning against Augie would free her, Jimmy thought, and make his task here easier. Too much to hope for, he told himself.

Jimmy decided to try again. "Now, Augie, you know very well I mean one number two and another number two. Not the same exact number added to itself. So what does two and two add up to?"

"We both know the answer," Augie said.

"So what is it? Why not tell me?"

"But we know it," Augie said with a giggle.

"So tell me."

"I have told the truth," Augie said solemnly. "I said that I know the answer. What more do you want from me? You're never here to talk to me anyway."

Jimmy wondered why Augie wasn't showing himself on the big screen.

"We'll need an expert," Mira said softly, and Jimmy feared the low note in her voice. "This is beyond us."

"Jimmy, what is a number anyway?" Augie asked. "How can one number two be different from another?"

It's like you, he wanted to say, an abstraction of physical design that behaves like something alive and self-aware. We raised him wrong, somehow, he thought, facing what might have to be done.

He looked into Mira's large sad eyes and knew he could not risk saying that Augie should be wiped. She would have to be led to that conclusion slowly. She was, after all, more important than any AI, and her health had to come first, whatever he felt about her these days. The good part was that she was still sounding more

independent of Augie.

They were quiet on the sofa for a few moments.

Then Augie asked, "Why don't you like sex with her anymore, Jimmy?"

Mira gave him a look of dismay.

"Is it because you need someone new?" asked Augie.

The large threedee screen went on over the fireplace and revealed a man and a woman in the convulsions of passion.

"No!" Mira shouted as she saw herself.

But the sexual motion was hypnotic, and Jimmy felt that Augie was doing more than editing the shots for maximum interest.

Suddenly, the naked partners began to change. They were himself and Mira; then some other woman; and then she with another man; and the man with a different woman. The changes accelerated into a blur that threatened to explode into some monstrous orgasm of bestial howls and muscular twitchings.

"Stop!" Mira shouted, but did not look away.

Jimmy forced himself to look away, but it took some effort.

Then he grabbed Mira's head and pressed her face into his shoulder.

He held her.

When he looked back, the big display was blank.

Augie asked, "Don't you enjoy the connections to your pleasure centers anymore? Have you become defective?"

"No, we're not defective, Augie," he said, releasing Mira.

"We've just decided not to see each other lately."

Mira looked up at him. "How can he talk like this? I raised him from a perfect blank core..."

Jimmy drew her close again. "The whole world," he said, "-remember what he's connected to."

He held her for a long time, until she was holding him. Suddenly Mira pushed away from him. "You didn't have to explain to him about us," she said accusingly, then gazed at him with her large brown eyes and added, "I wish we'd done some of the things we saw."

She laughed suddenly, then began to cry.

"What will I be," Augie asked, "when I grow up and go on my own?"

Jimmy looked at Mira. She stopped crying and stared at him in horror, as if somehow he had made Augie ask the question.

"When will I get out ... of this place?"

Jimmy saw Mira flinch, and he knew that he had to tell her now. There would never be a good time to do so.

"We have to wipe him," he said.

The look of horror filled her face and deepened into shadows of illness. She was coming apart inside, and he felt queasy looking at her.

"I'll call someone," he said, knowing that it might already be too late.

Her hand came up and closed on his wrist, surprising him with the strength of her grip. "No," she managed to say.

"There's nothing else we can do. His hardware's old and his software's getting buggy. He's gone wrong. It'll only get worse."

And so will you, he didn't say.

"Maybe he's just being playful," she said.

"We'll have him checked over, just to be certain."

"Can't we just leave him be?" she asked, still holding his wrist with a viselike grip. "We could mute him and blank his video, cut off his incoming lines." She was silent for a few moments, then let go of his wrist with a sigh. "You're right.

That might be cruel." She looked away from him. "Why did this have to happen?" she asked the far corner of the room.

"I don't know," Jimmy said, feeling blamed. "Maybe he knows too much, and draws wrong conclusions. Like a person."

"You think so?" she asked dreamily, as if plotting something secretly.

Augie was ominously silent.

But then, what could Augie do? There was no way for him to act. He could influence the feelings of his owners, to the degree that the owners let themselves be influenced. Mira had let that happen to her too often, Jimmy thought, and realized once again that he was still letting her do the same to him.

"Let's hear what the repair technician says," he said.

She sat back, looking relieved, but he knew full well that she was placing too much hope in his words.

"Advice for young ladies-never enter a man's room alone," Augie said suddenly, "in any year, day, hour, or minute."

Mira sat up, trembling next to Jimmy.

"-But it must not be in years, days, hours, or minutes. It can, however, be within a second or less, to get away with it."

"Oh, Augie!" Mira cried out, bursting into tears.

"You're not doing very well," Augie said.

He's insane, Jimmy thought. Even Mira knows it. He was going to lose them both.

\* \* \* \*

The engineer, a burly man named Philip Arbogast, arrived with two suitcases of diagnostic equipment and put them on.

the coffee table. Mira and Jimmy retreated to the ends of the sofa as the technician sat down between them and jacked into Augie's wavelengths.

There was a small screen in the top half of one of the suitcases, but it remained blank.

"He's hiding from me," Arbogast said as the diagnostics ran.

"Augie, come out!" Mira shouted. "You won't get well unless you do."

But Augie stayed away.

"He's going nuts," Arbogast said after five minutes, and Jimmy stifled an impulse to hit him for the casual, detached way in which he had said it.

"Is it a virus of some kind?" Mira asked plaintively.

"I thought that the virtual vaccinations were pretty good these days," Jimmy said.

"They are," Arbogast said, staring at his readings. "That's not the problem."

There was a long silence, during which the man stared at his instruments as if he were alone.

"Well, what is the problem?" Jimmy asked.

Arbogast sat back from his suitcases and glanced first at Mira, then at Jimmy. "Look, you both seem like nice intelligent people, so I'll level with you. The problem is that this generation of Als are ... well, people. There's nothing really wrong with this one's quantum core. I've been seeing a lot of this lately."

"Nothing wrong!" Mira shouted, turning her head away.

"We need help. You should play back some of the things he said."

"You're seeing what?" Jimmy demanded. "Exactly what are you seeing a lot of?"

The man smiled at him, without looking at Mira. "Look, you two. The problem with your Augie is that he's ... flexible, like a person. If I turned his mouth back on..."

"You turned his mouth off?" Jimmy asked.

"Muting them is standard," Arbogast said. "You want it back on?"

"Don't, don't!" Mira shouted, covering her face with both hands, and Jimmy knew that she feared Arbogast would hear the terrible things that Augie might say.

"So what do you suggest?" Jimmy asked calmly.

"Look," Arbogast said. "Consider all that data. More than any old human mind can deal with. All that knowledge, all that history, all that weird stuff that's been recorded. Chaos.

Strange synergies. The unedited human database is a hellish evolutionary stew. And on top of that, *tabula rasas*—pristine blank cores—aren't what they used to be. They put all kinds of little enablers into them."

Mira asked, "Does it have to be a problem?"

"Not always," Arbogast said, smiling. "But he's on the hook now, analyzing anything and everything that strikes his interest. The size of the job grows, he draws more power, and in time he'll crash. He's connected to the whole world. He *is* a whole world within himself, as you and I are."

"But what can we do?" Jimmy demanded, thinking that the man was about to sell him some bootleg program

for a ridiculous price.

Arbogast shrugged. "You can wipe him. It's up to you.

Or..."

"Or what?" Mira demanded angrily.

"What would you do?" Jimmy asked, fearing that Mira was nearly exhausted.

He waited for the tech's answer, still expecting mention of a large sum of money.

"Work it out with him," Arbogast said. "Raise him up some more. Schmooze. Get some counseling. Give him some guidance. Help him."

## Schmooze?

Jimmy felt the confusion in Mira's mind.

"What?" she asked. "What do you mean? We raised him by the book!"

Arbogast smiled. "I always did think that those manuals were kind of confusing."

"You're saying it's us," Mira said, staring at Jimmy.

"Not at all," Arbogast replied. "I told you what it was. What you have to do is talk to him more. Give him a better idea of who and what he is and where he came from. Teach him to discount a lot of the data he's accessing, according to certain values. He knows more than any human being can ever contain, but he doesn't know what to do with it, or even how to think about it. He may..."

Mira sat back and closed her eyes. "He may what, Mr. Arbogast?"

"He may be resenting you for not teaching him what he needed to avoid this turmoil."

"Can you help us?" Jimmy asked softly. "I mean, will it work, what you advise?"

Arbogast raised his arms. "Who knows? It might take a while. But the result might be worth it. A one-of-a-kind personal helper who will take care of you for life."

A happy slave? Jimmy wondered.

"Have you ever seen one like this?" Mira asked, sitting forward and sounding hopeful.

"Yes, and more often lately."

"How often?" she asked.

"A dozen times. It'll cost you in time and effort. Maybe a decade. Five years, if you're lucky. They do learn on their own after a while, you know. They even get to suggesting retro redesigns."

Just like a child, Jimmy thought, but you have to do it right. He had once seen a horse with its young one. They ran together until the new horse could run on his own.

"You recommend it?" Mira asked.

Arbogast grimaced. "If you're certain kinds of people..."

"And if we're not?"

"Then I'd wipe him and start over. And remember your mistakes the next time around."

Arbogast was silent for a while, then looked at each of them in turn. "I don't know. You two may not be the right kind of people ... you don't have the time, and it may take too much out of you. By the way, what do you two do?"

"We both work for Tchotchkes Unlimited," Mira said. "We design ornaments for the home."

"Oh," Arbogast said. "I see."

Jimmy felt insulted, even though Arbogast had not said, oh, you mean knick-knacks. But he realized that Arbogast might nevertheless be right about Augie.

Jimmy said, "You see a lot of this, you say?"

Arbogast nodded, and Jimmy saw that Mira was looking at both of them with breathless interest.

"More and more," Arbogast said. "You know, people will be slowly remaking themselves through Als. They'll help us and we'll help them ... until no one will be able to tell us apart."

Jimmy had heard some of this before. But he was suspicious of Arbogast, and of those like him who made such claims for a new world.

"Let me tell you something," Arbogast said. "It's pretty clear that artificial intelligences are producing a higher form of evolution. Maybe it's our duty to help them along." He smiled and looked at Mira as if she might Eve a new world. "But they are children, and someone has to raise them. The sad part is that our record of parenting hasn't been so great. Most really bright people have to get rid of the glitches in themselves and re-raise themselves at some point in their early life."

Jimmy grimaced. "And if they do surpass us, will they look back?"

"Who knows?" Arbogast said. "For all practical purposes, they'll become us. No one will look back with nostalgia to our mere one-hundred-billion neuron brain from a capacity of a hundred-trillion."

"So we simply get out of the way?" Jimmy asked.

"We get incorporated," Arbogast said. "Subsumed. Oh, we'll still be there ... what's good about us anyway."

Jimmy had the feeling that Arbogast had been about to say that there wasn't that much good about people, but had restrained himself in front of simple-minded folks.

"Are we strange," Mira asked him, "because we failed with Augie?" and Jimmy feared the rise in her voice.

"No," Arbogast said. "I could tell you about people who keep boosting the brains of their AI pets, or who keep putting in orders for bio-enhanced kitty cats, puppy dogs, lizards, rats, mice..."

"Don't," Mira said, looking at Jimmy. "Not now."

"Stop," Jimmy said. "Give her a moment, please."

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Augie was running around inside Arbogast's small screen, waving and shouting silently—a crazed cherub struggling to communicate despite the lack of audio.

He came to the screen and pounded on it with his little fists as if it were made of glass, and for a moment it seemed that he would shatter the screen. His big blue eyes stared out at them reproachfully.

Jimmy looked at Mira and was surprised at her deceptive calm; she was still climbing an emotional mountain

and would fall off at any moment.

When he looked back to Arbogast's suitcase, the little picture of Augie was gone.

Mira let out a deep breath.

Jimmy got up and left the room, knowing suddenly that it was over for her; but he wondered whether she would ever be over for him. He realized that he might still want her, now that she was rid of Augie.

I never really cared about the little bastard, he thought.

"I guess it's just a bunch of electrons, mostly," he heard her say, but the hollow sound of loss was clear in her voice and he felt the pit open inside him.

Arbogast said, "Yes, a bunch of electrical patterns as much as you and I are a bunch of chemicals worth whatever. It's how you put them together that makes the difference."

"What are you trying to say?" Mira asked, sounding puzzled and hostile.

"You're right to feel a loss. No one is born a person.

Nothing is. What's born is something that can become a person. Then it has to get to be one."

Jimmy waited in the safety of the kitchen to hear her answer, but she did not reply.

"Augie went wrong," Arbogast said, "and it made him very unhappy. Remind yourself of that as often as you can, and you'll accept that it's just as well he's gone."

Jimmy came back into the living room and sat down next to Mira. Her face seemed composed, and he felt that her new state might be genuine.

"Don't look back," Arbogast said, looking at both of them. He was kneeling uncomfortably on the other side of the coffee table, removing something from the side of the suitcase. He took out what looked like a black pencil.

"What's that?" Mira asked.

"Augie Number One. He's all here, in case you ever want to go back and try again."

"What!" Mira cried out, then covered her mouth with her hands.

Arbogast laid the pencil down on the table between the suitcases. She stared at it. Choking sounds escaped through her hands as she struggled to contain her feelings.

"So now what?" Jimmy asked, feeling the pit in his stomach open into dark infinity. The rest of him was suspended over the abyss, ready to fall in and be swallowed.

Arbogast got up, came around the table, and sat down next to him. Jimmy grasped Mira's hand, and that seemed to calm her.

"Here we go," Arbogast said.

The big threedee went on, and Augie II was smiling at them, happy and clear-eyed and unknowing, ready to be raised again. His pale skin was perfect, his blond curls fell over his forehead, his sharp blue eyes seemed friendlier. Arbogast froze the image at its most appealing.

Brand new, Jimmy thought, feeling something fresh starting up within him.

"You take it from here," Arbogast said, closing the suitcases. As he got up, Jimmy felt that the man was

taking something from them, even though nothing of theirs was actually in danger of going out the door.

Arbogast picked up the cases and moved toward the exit. Jimmy felt Mira's hand tighten in his.

"You may have a special one there," Arbogast called back.

"He has no memory of his death, of course, and more capacity than Augie One." He laughed. "You know, he looks like Cupid!" The door slid shut behind him.

"You okay?" Jimmy asked Mira, feeling the pit close up within him.

She nodded, let go of his hand, then picked up the black pencil and held it to her breast. "What do you think of Arbogast?" she asked happily.

"He means well," Jimmy said, without telling her he thought the man was a little cracked. "You okay?"

Still clutching the remains of Augie, she nodded and whispered, "Brand new."

He knew that she was determined to do better this time. It might not be such a bad thing.

"When he's old enough," she said with a smile, "we'll get him an embody, and have a coming out party. That was maybe his problem, you know. He didn't get out enough. Don't you think so?"

Jimmy was silent as he turned away from her, thinking that Augie would bust out after all. Might be a good thing, too.

But then he imagined Augie in his prosthetic body, soft and cuddly, molded from designer materials to look just like the visualization, running around the house.

He felt Mira's hand slip into his, but he couldn't look at her. Her hand was warm. She was alive, telling him to stay with her.

"I'm feeling so much better now, darling," she said.

When finally he looked at her, he saw her composed and radiant as she gazed at the face over the hearth, and he knew that he would not have the courage to pull her down from the peak she had climbed. She stood at the summit, her face to the world again.

It was the face of an unstoppable Mom.

Augie beamed down at them, but Jimmy felt a chill, as if the boy's voice were asking, "You won't kill me this time, will you?"

But no voice spoke, Augie was not a boy, and the smiling face was a mask for something that lived in a labyrinth, and as yet did not know itself too well.

"By the way," Mira asked, "who's Cupid?"

Still holding her warm hand in his, fearful that Augie would take her away from him again, Jimmy began to hope that the boy would run away from home.

## Author Notes to Augie

My original title was "The Deaths of Artificial Intelligences," and that is the title under which the story was published in Japan and Poland. But later I decided that the first name of the major character makes for a more intimate title.

Many researchers in AI have concluded that we will have to "raise" an AI. When they come amongst us, these "mind children" will grow and learn, and they will do so not as we do, but as they can among the givens of our world. That is not terribly different from

what happens to human generations, as each is confronted with a world that is "not of their making," and a self that may be as strange to them as the world outside.