

## *Chapter 1*

*In the basement of a large house halfway between Arlington and Langley, six men sat around a walnut conference table. The time on the leftmost of the clocks on the wall was half past midnight. According to the others, it was also five-thirty in London, seven-thirty in Moscow, nine-thirty in Karranh, two-thirty in Tokyo and four-thirty in Sydney.*

*The men looked tired. On the table were half a dozen mugs containing the dregs of coffee and tea; plates with cookie crumbs and empty candy wrappers were scattered among the mugs. In front of each man was a legal pad covered with notes. Five of the men were looking at the sixth, who sat at the head of the table.*

*Fisher glanced at the clocks, then asked, "Anything else from North America, Kirkpatrick?"*

*Kirkpatrick was the oldest. With sunken jowls and bloodshot, yellowing eyes, he looked sick as well as tired. He took off his half-moon glasses before he replied, holding them in a trembling hand. When he spoke, there was an unhealthy raspiness in his voice.*

*"Only one more thing. Ishihara left Roncador Cay early this evening. His flight plan gives his destination as Rocky Mountain Metro Airport, in Jefferson County, Colorado."*

*"Colorado?" echoed Gallucci. "What on Earth's in Colorado?"*

## Category Five

“I think,” said Kirkpatrick deliberately, “he’s going to recruit Oscar Holywell.”

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Boulder, Colorado

“The question of whether quantum effects are necessary for consciousness to....”

A distant bell interrupted Oscar Holywell in mid-sentence. Relief showed on the faces of his half-dozen students.

Dr. Holywell was as relieved as his students, although he was careful not to let it show. “See you all again on Monday,” he said with a distinct lack of enthusiasm. “And don’t forget I want your essays on Penrose by Tuesday at the latest.”

His words were lost in the scraping of chairs and the noisy gathering of books and doodle-covered notepads. The students pulled damp, heavy coats from the backs of chairs, where for the last hour they had filled the cramped basement room with a sour wetness.

Erasing the whiteboard as they trooped from the room, Holywell mumbled to himself, “Only one more week before the break”; then he caught himself guiltily as he saw out the corner of his eye that one student had stayed behind.

Melissa Turner was dressing to brave the elements, her movements deliberate and slow as she wound a pastel yellow woolen scarf around her pale neck.

The door banged closed, leaving the two of them alone. A knot tighten in Holywell’s stomach.

Oscar Holywell was thirty five years old, with hair that was thin and unfashionably long, and pale skin that was still subject to occasional bouts of the acne that had plagued him since puberty. His cheeks were hollow and bore the beginnings of permanent wrinkles. His teeth were yellow and distinctly crooked. His clothes looked like they had been acquired in a garage sale a decade earlier.

Melissa Turner was twenty two years old. A natural blonde with unblemished skin, her teeth were meticulously straight and unnaturally white. Her clothes were as expensive as Holywell’s were cheap.

The two of them had nothing in common — except *The Philosophy of Consciousness*, the class that had brought them together

every Monday, Wednesday and Friday afternoon for the past fourteen weeks.

Melissa looked uncertainly at Holywell, lines of doubt creasing her normally smooth forehead.

He suppressed a sigh, hoping he had misread the signs. “Yes, Melissa? Is there something I can help you with?”

She smiled, exposing her too-white, too-even teeth. A thick lock of straight blonde hair slipped forward, hiding one eye momentarily before she flicked it back and barraged him with both aquamarine eyes.

“Thank you, Professor. I was wondering....” She let the sentence hang in the air, unfinished.

“Yes, Melissa?”

“Well, it’s a bit embarrassing really. I’m afraid I’m having difficulty following your arguments in this paper.”

She opened her notebook and extracted a reprint. He glanced at the title: *On the Necessity of Quantum Effects as a Precursor to Consciousness*. It was the last research paper he’d been allowed to publish, almost five years ago.

She continued, “I’m sorry if I’m being stupid, but I wondered if you might be able to find some time to help me try and understand it.”

“My office hours are Tuesday and Thursday, starting at four o’clock.”

“Yes, I know, Professor. But I’m afraid I have another class then.”

“So when would be convenient?”

She blinked a couple of times, then looked away as if she knew she was about to make a slightly improper suggestion.

“Well, Professor, next week is the last one before winter break, and I’m pretty busy all week. I was wondering if you might have some free time this weekend? I know it’s an awful imposition, but I’m sure it’d help me understand some of the points you’re trying to make, in the paper as well as in the class. I expect you’ve noticed I’m not doing very well, and I do need to get at least a B in this class.”

He tried to let her down gently. “I’m sorry, Melissa, but I’m busy all weekend. How about after the lecture on Monday?”

## *Category Five*

She looked at him doubtfully, weighing her chances. After a few moments, she slipped the reprint back into the notebook and turned gracelessly away. “All right. I’ll try to keep myself free after class. Have a nice weekend, Professor.” Without giving him another glance, she adjusted her coat and scarf one more time, then left the room.

Oscar made a wry face to himself and shook his head silently. He picked up his lecture notes and turned out the lights. The basement corridor outside the converted storage room was almost empty. The only people he saw as he walked to the elevator were a pair of undergraduates, deep in conversation.

He waited for the elevator to arrive, tapping his foot impatiently. Melissa Turner had soured his already curdled mood.

“Good evening, Oscar.”

He turned to see a young Associate Professor from England approaching. Oscar struggled to remember his name. Graham? Arthur? Charles? He finally settled on Ian. Some sort of specialist in laser optics. Perhaps.

“Hello, Ian,” he said without warmth.

Ian looked at him oddly. “Everything going all right with that graduate class? What’s it called? Artificial Intelligence and Consciousness, or something like that?”

The elevator pinged and the doors slid unsteadily open. Oscar stepped inside and stabbed the number 4. Ian pressed the 2.

“Couldn’t imagine it being better,” said Oscar flatly. The doors rattled closed and the elevator began to rise.

“Good, good.”

The laser specialist seemed to have run out of things to say, and the elevator carried them to the second floor in silence. “Have a nice weekend, then,” Ian said as the doors opened.

“You too.”

Ian stepped out. A faculty member paused in mid-stride and accosted him. “Harold, just the man I wanted to see.”

The elevator doors closed. “Damn fool looks like he should be called Ian,” Oscar mumbled to the empty elevator.

The doors opened on the fourth floor, and he stepped out. Fiddling with his keys, he turned the corner to his office and looked up in surprise. Standing in front of his door was a man who looked

like he had been waiting for some time. An oriental of some kind: Chinese perhaps, or maybe Korean. Oscar never had been very good at ethnic types.

The man moved to one side as Oscar fitted a key in the lock. “Professor Holywell?”

“Technically, it’s Doctor, not Professor. But yes, I’m Holywell. Do I know you?”

Oscar was inside the office now. The man followed and closed the door without being asked. He was short, no more than five-four, in his mid fifties, with a head of thick, gray hair. He wore a business suit and a muted plain blue-gray tie. He regarded Oscar through round, wire-rimmed glasses.

“We’ve never met, Doctor Holywell, but I’ve long been an admirer of yours.” His accent and a clipped precision in his speech betrayed the fact that English was not his first language.

“Sit down,” Oscar said, seating himself behind a cluttered industrial metal desk painted a particularly repulsive shade of battleship gray. He glanced out the window. It was still snowing, even harder than before the lecture.

Looking impatiently at his watch, he said, “I’m afraid I don’t have much time.”

“My name is Yoshi Ishihara.”

The oriental extended a hand across the desk. Oscar shook it perfunctorily.

Mr. Ishihara continued, “I know you’re a busy man, so I’ll come straight to the point. Are you happy in your work here?”

Oscar’s eyebrows rose in surprise, then slowly lowered.

“Ecstatic,” he replied evenly.

Mr. Ishihara regarded Oscar dubiously. “Dr. Holywell, are you playing games with me? Please, my question is a serious one. Are you happy here, or is there a possibility you could be persuaded to leave?”

Oscar leaned forward, thrusting himself halfway across the desk.

“Mr. Ishihara, I have no idea who you represent, but I can assure you they’ve made a mistake. This university graciously allows me to teach one graduate level course of no earthly use to anyone. They pay me a pittance, but it’s enough to keep me off the streets.

## *Category Five*

Teaching is boring but hardly arduous, and it leaves me plenty of time for my real work.

“I like Colorado and I’ve no intention of moving. In any case, I haven’t published anything for years. Everyone has forgotten I exist. So I suggest you go back to wherever you came from and tell your superiors they’ve made a mistake. I assure you they really don’t want to hire me.”

Mr. Ishihara pondered this in silence for half a minute. Then he asked, “Dr. Holywell, do you have any plans for the weekend?”

Oscar laughed out loud. “You’re the second person to ask me that in the last ten minutes. Yes, I have plans. I intend to get some work done. Failing that, I’ll curl up with a good book and a bottle of wine and do my damndest to forget about what passes for reality for a while. Now, if you’ll excuse me, I live in the mountains and the last thing I want is to be stuck here all weekend because of the damn snow.”

Mr. Ishihara made no movement to leave. “You mentioned your work.... Are you still working on the idea that one day it might be possible to create a conscious machine?”

Oscar had risen from his chair, intending to see Mr. Ishihara to the door. Now he paused.

“Yes, that’s what I’m working on.”

“And yet you’ve published nothing for five years now. Why not?”

“That, Mr. Ishihara, is because the fools who edit so-called scientific journals insist on a process called peer review.”

“Which means?”

Oscar regained his seat and took a deep breath. The snow was forgotten. On this subject he was happy to talk to Mr. Ishihara for as long as his visitor would listen.

“It means one cannot simply publish the truth. One submits a paper to a journal for review. The editor sends the paper to two or three so-called peers for their comments and suggestions for changes. If the author agrees to the changes, they review the revised version and usually the journal agrees to publish.”

“But not always?”

“Mr. Ishihara, in the past five years I’ve submitted half a dozen papers to every prestigious journal in the field. The reviewers and

editors seem to have agreed among themselves that nothing I write is worthy of publication.”

“I see. And what do you make of this, Dr. Holywell?”

“It’s simple. My so-called peers are either too stupid to realize how important my work is, or they’re so jealous that they intend to steal my conclusions and publish them themselves. On balance, I incline toward the former theory.”

“And what exactly have they blocked from publication? Your last published paper contained some intriguing ideas about Category Five machines. Have you changed your mind since then?”

“Not at all. Everything I’ve done in the last few years has simply confirmed what I said in that paper. The only thing that’s changed in my mind is that then I was merely speculating about possibilities; now I’m convinced I’m right.”

Mr. Ishihara nodded to himself quickly several times; a smile played around his lips and a mischievous glint appeared in his eyes. Watching him, Oscar thought he looked like someone at a race track who’d just seen an outsider on which he’d betted heavily romp home two lengths clear of the field.

Ishihara asked, “So you still believe that one day it will be possible to build a conscious computer? A machine that really thinks?”

“I’m convinced of it.”

“And when do you think this might happen?”

Oscar shrugged. “Who knows? Technology still has a long way to go, and in any case no one seems to be going down the right path. They’re all slaves to convention. The conventional notion that a Category Five machine is simply a cleverly programmed Category One machine is ridiculous. My guess is that it will take at least five years, more probably ten. Maybe longer.”

Mr. Ishihara looked at his watch, then abruptly got to his feet. He walked briskly to the door. With his hand on the handle he said, “I have a private jet waiting at Rocky Mountain Metro Airport. An hour from now, I propose to be on it. I urge you to join me.”

“Why?”

“Because technology has moved faster than you thought. And I assure you that not everyone is a slave to convention. I’m here to give you a choice, Dr. Holywell. You can stay here wasting your talents teaching graduate students and writing papers that will be

### *Category Five*

rejected by people who don't understand the importance of what you have to say — or you can help me build a Category 5 machine.”

Without waiting for Oscar's reply, he slipped from the room, leaving the door open behind him.

For a quarter of a minute Oscar Holywell sat in his chair, looking at the door with a frown on his face and a speculative look in his eyes. Then he rushed out of the office, running to catch up with Mr. Ishihara.