



# Nemesis

Isaac Asimov

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NIGHTFALL

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**ISAAC ASIMOV**

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**NEMESIS**



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NEMESIS

*A Bantam Spectra Book / published by arrangement with Doubleday*

*PUBLISHING HISTORY*

*Doubleday edition published October 1989*

*Bantam edition / October 1990*

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*Library of Congress Catalog Card Number: 89-32938.*

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*For information address:*

*Doubleday, New York, New York*

eISBN: 978-0-307-48863-3

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To Mark Hurst,  
my valued copy editor,  
who, I think, works over  
my manuscripts  
harder than I do

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## AUTHOR'S NOTE

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This book is not part of the Foundation Series, the Robot Series, or the Empire Series. It stands independently. I just thought I'd warn you of that to avoid misapprehension. Of course, I might someday write another novel tying this one to the others, but, then again, I might not. After all, for how long can I keep flogging my mind to make it work out the complexities of future history?

Another point. I made up my mind long ago to follow one cardinal rule in all my writing: to be *clear*. I have given up all thought of writing poetically or symbolically or experimentally, or in any of the other modes that might (if I were good enough) get me a Pulitzer prize. I would write merely clearly and in this way establish a warm relationship between myself and my readers, and the professional critics— Well, they can do whatever they wish.

However, my stories write themselves, I'm afraid, and in this one, I was rather appalled to find out that I was writing it in two strands. One set of events was taking place in the story's present, and another set was taking place in the story's past, but steadily approaching the present. I am sure you will have no trouble following the pattern, but since we are old friends, I thought I would let you know.

## PROLOGUE

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He sat there alone, enclosed.

Outside were the stars, and one particular star with its small system of worlds. He could see it in his mind's eye, more clearly than he would see it in reality if he merely de-opacified the window.

A small star, pinkish-red, the color of blood and destruction, and named appropriately.

Nemesis!

Nemesis, the Goddess of Divine Retribution.

He thought again of the story he had once heard when he was young—a legend, a myth, a tale of a worldwide Deluge that wiped out a sinful degenerate humanity, leaving one family with which to start anew.

No flood, this time. Just Nemesis.

The degeneration of humanity had returned and the Nemesis that would be visited upon was an appropriate judgment. It would not be a Deluge. Nothing as simple as a Deluge.

Even for the remnant who might escape— Where would they go?

Why was it he felt no sorrow? Humanity could not continue as it was. It was dying slowly through its own misdeeds. If it exchanged a slow excruciating death for a much faster one, was that a cause for sorrow?

Here, actually circling Nemesis, a planet. Circling the planet, a satellite. Circling the satellite, Rotor.

That ancient Deluge carried a few to safety in an Ark. He had only the vaguest idea of what the Ark was, but Rotor was its equivalent. It carried a sampling of humanity who would remain safe and from which a new and far better world would be built.

But for the old world—there would be only Nemesis!

He thought of it again. A red dwarf star, moving on its inexorable path. Itself and its worlds were safe. Not so Earth.

Nemesis was on its way, Earth!

Wreaking its Divine Retribution!

## MARLEME

### 1.

Marlene had last seen the Solar System when she was a little over one year old. She didn't remember it, of course.

She had read a great deal about it, but none of the reading had ever made her feel that she could ever have been part of her, nor she a part of it.

In all her fifteen years of life, she remembered only Rotor. She had always thought of it as a large world. It was eight kilometers across, after all. Every once in a while since she was ten—once a month when she could manage it—she had walked around it for the exercise, and sometimes had taken the low-gravity paths so she could skim a little. That was always fun. Skim or walk, Rotor went on and on, with its buildings, its parks, its farms, and mostly its people.

It took her a whole day to do it, but her mother didn't mind. She said Rotor was perfectly safe. "Not like Earth," she would say, but she wouldn't say *why* Earth was not safe. "Never mind," she would say.

It was the people Marlene liked least. The new census, they said, would show six thousand of them on Rotor. Too many. Far too many. Every one of them showing a false face. Marlene hated seeing those false faces and knowing there was something different inside. Nor could she say anything about it. She had tried sometimes when she had been younger, but her mother had grown angry and told her she must never say things like that.

As she got older, she could see the falseness more clearly, but it bothered her less. She had learned to take it for granted and spend as much time as possible with herself and her own thoughts.

Lately, her thoughts were often on Erythro, the planet they had been orbiting almost all her life. She didn't know why these thoughts were coming to her, but she would skim to the observation deck at odd hours and just stare at the planet hungrily, wanting to be there—right there on Erythro.

Her mother would ask her, impatiently, why she should want to be on an empty barren planet, but she never had an answer for that. She didn't know. "I just want to," she would say.

She was watching it now, alone on the observation deck. Rotorians hardly ever came here. They had seen it all, Marlene guessed, and for some reason they didn't have her interest in Erythro.

There it was; partly in light, partly dark. She had a dim memory of being held to watch it swim into view, seeing it every once in a while, always larger, as Rotor slowly approached all those years ago.

Was it a real memory? After all, she had been getting on toward four then, so it might be.

But now that memory—real or not—was overlaid by other thoughts, by an increasing realization of just how large a *planet* was. Erythro was. over twelve thousand kilometers

across, not eight kilometers. She couldn't grasp that size. It didn't look that large on the screen and she couldn't imagine standing on it and seeing for hundreds—or even thousands—of kilometers. But she knew she wanted to. Very much.

Aurinel wasn't interested in Erythro, which was disappointing. He said he had other things to think of, like getting ready for college. He was seventeen and a half. Marlene was only just past fifteen. That didn't make much difference, she thought rebelliously, since girls developed more quickly.

At least they should. She looked down at herself and thought, with her usual dismay and disappointment, that somehow she still looked like a kid, short and stubby.

She looked at Erythro again, large and beautiful and softly red where it was lit. It was large enough to be a planet but actually, she knew, it was a satellite. It circled Megas, and it was Megas (much larger still) that was really the planet, even though everyone called Erythro by that name. The two of them together, Megas and Erythro, *and* Rotor, too, circled the star, Nemesis.

"Marlene!"

Marlene heard the voice behind her and knew that it was Aurinel. She had grown increasingly tongue-tied with him of late, and the reason for it embarrassed her. She loved the way he pronounced her name. He pronounced it correctly. Three syllables—Mar-LAY-nu—with a little trill to the "r." It warmed her just to hear it.

She turned and mumbled, "Hi, Aurinel," and tried not to turn red.

He grinned at her. "You're staring at Erythro, aren't you?"

She didn't answer that. Of course that's what she would be doing. Everyone knew how she felt about Erythro. "How come you're here?" (Tell me you were looking for me, she thought.)

Aurinel said, "Your mother sent me."

(Oh well.) "Why?"

"She said you were in a bad mood and every time you felt sorry for yourself, you came up here, and I was to come and get you because she said it would just make you grumpier if I stay here. So why are you in a bad mood?"

"I'm not. And if I am, I have reasons."

"What reasons? Come on, now. You're not a little kid any more. You've got to be able to express yourself."

Marlene lifted her eyebrows. "I am quite articulate, thank you. My reasons are that I would like to travel."

Aurinel laughed. "You've traveled, Marlene. You've traveled more than two light-years. No one in the whole history of the Solar System has ever traveled even a small fraction of a light-year. —Except us. So you have no right to complain. You're Marlene Insigna Fisher, Galactic Traveler."

Marlene suppressed a giggle. Insigna was her mother's maiden name and whenever Aurinel said her three names in full, he would salute and make a face, and he hadn't done that in a long time. She guessed it was because he was getting close to being a grown-up and he had to practice being dignified.

She said, "I can't remember that trip at all. You know I can't, and not being able to remember it means it doesn't matter. We're just here, over two light-years from the Sol."

System, and we're never going back."

"How do you know?"

"Come on, Aurinel. Do you ever hear anyone talk about going back?"

"Well, even if we don't, who cares? Earth is a crowded world and the whole Solar System was getting crowded and used up. We're better off out here—masters of all we survey."

"No, we're not. We survey Erythro, but we don't go down there to be its masters."

"Sure we do. We have a fine working Dome on Erythro. You know that."

"Not for us. Just for some scientists. I'm talking about *us*. They don't let us go down there."

"In time," said Aurinel cheerfully.

"Sure, when I'm an old woman. Or dead."

"Things aren't that bad. Anyway, come on out of here and into the world and make your mother happy. I can't stay here. I have things to do. Dolorette—"

Marlene felt a buzzing in her ears and she didn't hear exactly what Aurinel said after that. It was enough to hear—Dolorette!

Marlene *hated* Dolorette, who was tall and—and *vacuous*.

But what was the use? Aurinel had been hanging around her, and Marlene knew, just by looking at him, exactly how he felt about Dolorette. And now he had been sent to find her and he was just wasting his time. She could tell that was how he felt and she could also tell how anxious he was to get back to that—to that Dolorette. (Why could she always tell? She was so hateful sometimes.)

Quite suddenly, Marlene wanted to hurt him, to find words to give him pain. True words, though. She wouldn't lie to him. She said, "We're never going back to the Solar System. *know* why not."

"Oh, why's that?" When Marlene, hesitating, said nothing, he added, "Mysteries?"

Marlene was caught. She was not supposed to say this. She mumbled, "I don't want to say. I'm not supposed to know." But she *did* want to say. At the moment she wanted *everyone* to feel bad.

"But you'll tell me. We're friends, aren't we?"

"Are we?" Marlene asked. She said, "Okay, I'll tell you. We're not ever going back because Earth is going to be destroyed."

Aurinel didn't react as she had expected. He burst into a loud squawk of a laugh. It took him a while to settle down, and she glared at him indignantly.

"Marlene," he said, "where did you hear that? You've been viewing thrillers."

"I have *not!*"

"But what makes you say anything like that?"

"Because I know. I can tell. From what people say, but don't say, and what they do, when they don't know they're doing it. And from things the computer tells me when I ask the right questions."

"Like what things it tells you?"

"I'm not going to tell *you*."

"Isn't it possible? Just *barely* possible"—and he held up two fingers very closely together—"that you're imagining things?"

"No, it isn't possible. Earth won't be destroyed right away—maybe not for thousands of years—but it's going to be destroyed." She nodded solemnly, her face intense. "And nothing"

can stop it.”

Marlene turned and walked away, angry at Aurinel for doubting her. No, not doubting her. It was more than that. He thought she was out of her mind. And there it was. She had said too much and had gained nothing by it. *Everything* was wrong.

Aurinel was staring after her. The laughter had ceased on his boyishly handsome face and a certain uneasiness was creasing the skin between his eyebrows.

## 2.

Eugenia Insigna had grown middle-aged during the trip to Nemesis, and in the course of the long stay after arrival. Over the years she had periodically warned herself: This is for life and for our children's lives into the unseen future.

The thought always weighed her down.

Why? She had known this as the inevitable consequence of what they had done from the moment Rotor had left the Solar System. Everyone on Rotor—volunteers all—had known it. Those who had not had the heart for eternal separation had left Rotor before takeoff, and among those who had left was—

Eugenia did not finish that thought. It often came, and she tried never to finish it.

Now they were here on Rotor, but was Rotor “home”? It was home for Marlene; she had never known anything else. But for herself, for Eugenia? Home was Earth and Moon and Saturn and Mars and all the worlds that had accompanied humanity through its history and prehistory. They had accompanied life as long as there had been life. The thought that “home” was not here on Rotor clung to her even now.

But, then, she had spent the first twenty-eight years of her life in the Solar System and she had done graduate work on Earth itself in her twenty-first to twenty-third years.

Odd how the thought of Earth periodically came to her and lingered. She hadn't liked Earth. She hadn't liked its crowds, its poor organization, its combination of anarchy in the important things and governmental force in the little things. She hadn't liked its assaults of bad weather, its scars over the land, its wasteful ocean. She had returned to Rotor with an overwhelming gratitude, and with a new husband to whom she had tried to sell her dear little turning world—to make its orderly comfort as pleasant to him as it was to her, who had been born into it.

But he had only been conscious of its smallness. “You run out of it in six months,” he had said.

She herself hadn't held his interest for much longer than that. Oh well—

It would work itself out. Not for her. Eugenia Insigna was lost forever between worlds. But for the children. Eugenia had been born to Rotor and could live without Earth. Marlene had been born—or almost born—to Rotor alone and could live without the Solar System, except for the vague feeling that she had originated there. Her children would not know even that and would not care. To them, Earth and the Solar System would be a matter of myth, and Erythro would have become a rapidly developing world.

She hoped so. Marlene had this odd fixation on Erythro already, though it had only developed in the last few months and might leave just as quickly as it had come.

Altogether, it would be the height of ingratitude to complain. No one could possibly have imagined a habitable world in orbit about Nemesis. The conditions that created habitability

were remarkable. Estimate those probabilities and throw in the nearness of Nemesis to the Solar System and you would have to deny that it could possibly have happened.

She turned to the day's reports, which the computer was waiting, with the infinite patience of its tribe, to give her.

Yet before she could ask, her receptionist signaled and a soft voice came from the small button-speaker pinned to the left shoulder of her garment, "Aurinel Pampas wishes to see you. He has no appointment."

Insigna grimaced, then remembered that she had sent him after Marlene. She said, "Let him come in."

She cast a quick look at the mirror. She could see that her appearance was reasonable. To herself, she seemed to look younger than her forty-two years. She hoped she looked the same way to others.

It seemed silly to worry about her appearance because a seventeen-year-old boy was about to enter, but Eugenia Insigna had seen poor Marlene looking at that boy and she knew what that look portended. It didn't seem to Insigna that Aurinel, who was so fond of his own appearance, would ever think of Marlene, who had never been able to rid herself of her childhood pudginess, in any way other than as an amusing child. Still, if Marlene had to face failure in this, let her not feel that her mother had contributed to that failure in any way and had been anything but charming to the boy.

She'll blame me anyway, thought Insigna with a sigh, as the boy walked in with a smile that had not yet outgrown its adolescent shyness.

"Well, Aurinel," she said. "Did you find Marlene?"

"Yes, ma'am. Right where you said she'd be, and I told her you wanted her out of there."

"And how is she feeling?"

"If you want to know, Dr. Insigna—I can't tell if it's depression or something else, but she has a rather funny idea in her head. I don't know that she'd like my telling you about it."

"Well, I don't like setting spies on her either, but she frequently has strange ideas and she worries me. Please tell me what she said."

Aurinel shook his head. "All right, but don't tell her I said anything. This one is *really* crazy. She said that Earth was going to be destroyed."

He waited for Insigna to laugh.

She did not. Instead, she exploded. "*What?* What made her say that?"

"I don't know, Dr. Insigna. She's a very bright kid, you know, but she gets these funny ideas. Or she may have been putting me on."

Insigna cut in. "She may have been doing exactly that. She has a strange sense of humor. So listen, I don't want you to repeat this to anyone else. I don't want silly stories to get started. Do you understand?"

"Certainly, ma'am."

"I'm serious. Not a word."

Aurinel nodded briskly.

"But thanks for telling me, Aurinel. It was important to do so. I'll speak to Marlene and find out what's bothering her—and I won't let her know you told me."

"Thank you," said Aurinel. "But just one thing, ma'am."

"What's that?"

“Is Earth going to be destroyed?”

Insigna stared at him, then forced a laugh. “Of course not! You may go now.”

Insigna looked after him and wished earnestly that she could have managed a more convincing denial.

### 3.

Janus Pitt made an impressive appearance, which had helped him in his rise to power as Commissioner of Rotor. In the early days of the formation of the Settlements, there had been a push for people of no more than average height. There had been thoughts of having a smaller per capita requirement for room and resources. Eventually, the caution had been deemed unnecessary and had been abandoned, but the bias was still there in the genes of the early Settlements and the average Rotorian remained a centimeter or two shorter than the average citizens of later Settlements.

Pitt was tall, though, with iron gray hair, and a long face, and deep blue eyes, and a body that was still in good shape, despite the fact that he was fifty-six.

Pitt looked up and smiled as Eugenia Insigna entered, but felt the usual small surge of uneasiness. There was something always uneasy-making about Eugenia, even wearying. She had these Causes (capital C) that were hard to deal with.

“Thank you for seeing me, Janus,” she said, “on such short notice.”

Pitt placed his computer on hold, and leaned back in his chair, deliberately producing an air of relaxation.

“Come,” he said, “there’s no formality between us. We go back a long way.”

“And have shared a great deal,” said Insigna.

“So we have,” said Pitt. “And how is your daughter?”

“It’s about her I wish to speak, as a matter of fact. Are we shielded?”

Pitt’s eyebrows arched. “Why shielded? What is there to shield and from whom?”

The very question activated Pitt’s realization of the odd position in which Rotor found itself. To all practical purposes, it was alone in the Universe. The Solar System was more than two light-years away, and no other intelligence-bearing worlds might exist within hundreds of light-years or, for all anyone knew, billions of light-years in any direction.

Rotorians might have fits of loneliness and uncertainty, but they were free of any fear of outside interference. Well, almost any fear, thought Pitt.

Insigna said, “You know what there is to shield. It was you who have always insisted on secrecy.”

Pitt activated the shield and said, “Are we to take that up again? Please, Eugenia, it’s settled. It was settled when we left fourteen years ago. I know that you brood about it now and then—”

“Brood about it? Why not? It’s *my* star,” and her arm flailed outward as if in the direction of Nemesis. “It’s *my* responsibility.”

Pitt’s jaw tightened. Do we have to go through all this again? he thought.

Aloud, he said, “We’re shielded. Now, what’s bothering you?”

“Marlene. My daughter. Somehow she knows.”

“Knows what?”

“About Nemesis and the Solar System.”



“How could she know? Unless you’ve told her?”

Insigna spread her arms helplessly. “Of course I didn’t tell her, but I don’t have to. I don’t know how it is, but somehow Marlene seems to hear and see everything. And from the little things she hears and sees, she works things out. She’s always been able to do it, but in the last year it’s grown much worse.”

“Well then, she guesses, and sometimes she makes lucky guesses. Tell her she’s wrong, and see that she doesn’t talk about it.”

“But she’s already told a young man, who came to tell me. That’s how I know. Aurinel Pampas. He’s a friend of the family.”

“Ah yes. I’m aware of him—somewhat. Simply tell him not to listen to fantasies made up by a little girl.”

“She’s not a little girl. She’s fifteen.”

“To him, she’s a little girl, I assure you. I said I’m aware of the young man. I’m under the impression he’s pushing adulthood very hard and I remember, when I was his age, that fifteen-year-old girls were beneath contempt, especially if they were—”

Insigna said bitterly, “I understand. Especially if they are short, plump, and plain. Does it matter that she’s highly intelligent?”

“To you and to me? Certainly. To Aurinel, certainly not. If necessary, I’ll talk to the boy. You talk to Marlene. Tell her the idea is ridiculous, that it isn’t true, and that she must not spread disturbing fairy tales.”

“But what if it is true?”

“That’s beside the point. Look, Eugenia, you and I have concealed this possibility for years and it would be better if we continued to conceal it. If it gets around, it will be exaggerated and there will be rising sentiment about the matter—useless sentiment. It will only distract us from the job that has occupied our time ever since we left the Solar System, and which will continue to occupy us for generations, perhaps.”

She looked at him—shocked, unbelieving.

“Have you really no feeling for the Solar System, for Earth, the world on which humanity originated?”

“Yes, Eugenia, I have all sorts of feelings. But they’re visceral and I can’t let them sway me. We left the Solar System because we thought it was time for humanity to spread outward. Others, I’m sure, will follow; maybe they are already doing so. We have made humanity a Galactic phenomenon and we mustn’t think in terms of a single planetary system any more. Our job is *here*.”

They stared at each other, then Eugenia said, with a touch of hopelessness, “You’ll talk me down again. You’ve talked me down for so many years.”

“Yes, but next year I’ll have to again, and the year after. You won’t stay down, Eugenia, and you tire me. The first time should have been enough.” And he turned away, back to his computer.

## NEMESIS

## 4.

The first time he had talked her down had been sixteen years ago in the year 2220, the exciting year in which the possibilities of the Galaxy had opened up for them.

Janus Pitt's hair was a dark brown then, and he was not yet Commissioner of Rotor, though everyone spoke of him as the up-and-coming man. He did head the Department of Exploration and Commerce, however, and the Far Probe was his responsibility, and, to a large extent, the result of his actions.

It was the first attempt to push matter through space with a hyper-assisted drive.

As far as was known, only Rotor had developed hyper-assistance and Pitt had been the strongest proponent of secrecy.

He had said at a meeting of the Council. "The Solar System is crowded. There are more space Settlements than can easily be found room for. Even the asteroid belt is only a amelioration. It will be uncomfortably crowded soon enough. What's more, each Settlement has its own ecological balance and we are drifting apart in that respect. Commerce is being throttled for fear of picking up someone else's strains of parasites or pathogens.

"The only solution, fellow Councillors, is to leave the Solar System—without fanfare and without warning. Let us leave and find a new home, where we can build a new world, with our own brand of humanity, our own society, our own way of life. This can't be done without hyper-assistance—which we have. Other Settlements will eventually learn the technique and will leave, too. The Solar System will be a dandelion gone to seed, its various components drifting in space.

"But if we go first, we will find a world, perhaps, before others follow. We can establish ourselves firmly, so that when others do follow and, perhaps, come across us in our new world, we will be strong enough to send them elsewhere. The Galaxy is large and there are bound to be elsewhere."

There had been objections, of course, and fierce ones. There were those who argued out of fear—fear of leaving the familiar. There were those who argued out of sentiment—sentiment for the planet of birth. There were those who argued out of idealism—the desire to spread knowledge so that others might go, too.

Pitt had scarcely thought he would win out. He had done so because Eugenia Insigna had supplied the winning argument. What an incredible stroke of luck it was that she had come to him first.

She was quite young then, only twenty-six, married but not yet pregnant. She was excited, flushed, and laden down with computer sheets.

Pitt had frowned, he recalled, at her intrusion. He was Secretary of the Department and she—well, she was nobody although, as it happened, this was the very last moment when she would be nobody.

At the time, he didn't realize this, of course, and he was annoyed that she had forced him

way in. He cringed at the obvious excitement of the young woman. She was going to make him go through the infinite complexities of whatever it was she was holding in her hand, and do so with an enthusiasm that would quickly exhaust him.

She should give a brief summary to one of his assistants. He decided to say so. "I see you have data there, Dr. Insigna, that you wish to bring to my attention. I'll be glad to look at it in due course. Why don't you leave it with one of my people?" And he indicated the door, hoping ardently that she would about-face and move in that direction. (Sometimes, in idyllic moments in later years, he would wonder what would have happened if she had, and his blood would run cold at the thought.)

But she said, "No no, Mr. Secretary. I must see you and no one else." Her voice trembled as she spoke, as though her inner excitement was unbearable. "It's the greatest discovery anyone has made since—since—" She gave up. "It's the *greatest*."

Pitt looked dubiously at the sheets she was holding. They were quivering, but he felt no answering excitement of his own. These specialists always thought some micro-advance in their micro-field was system-shattering.

He said, resigned, "Well, Doctor, can you explain it simply?"

"Are we shielded, sir?"

"Why do we have to be shielded?"

"I don't want anyone else to hear till I'm sure—sure—I have to check again and recheck till there's no doubt. But, really, I have no doubt. I'm not making sense, am I?"

"No, you're not," said Pitt coldly, placing his hand on a contact. "We're shielded. Now tell me."

"It's all here. I'll show it to you."

"No. First tell me. In words. Briefly."

She drew a deep breath. "Mr. Secretary, I've discovered the nearest star." Her eyes were wide and she was breathing rapidly.

Pitt said, "The nearest star is Alpha Centauri and that's been known for four centuries."

"It's the nearest star we've known, but it isn't the nearest we can know. I have discovered one that is closer. The Sun has a distant companion. Can you believe it?"

Pitt considered her carefully. It was rather typical. If they were young enough, enthusiastic enough, inexperienced enough, they would explode prematurely every time.

He said, "Are you sure?"

"I am. Really. Let me show you the data. It's the most exciting thing that has happened in astronomy since—"

"*If* it's happened. And don't show me the data. I'll look at it later. *Tell* me. If there's a star much closer than Alpha Centauri, why hasn't it been discovered before now? Why was it left to you to do so, Dr. Insigna." He knew he was sounding sarcastic, but she didn't seem to pay attention to his tone. She was far too excited.

"There's a reason. It's behind a cloud, a dark cloud, a puff of dust that just happens to be between the companion star and ourselves. Without the absorption of the dust, it would be an eighth-magnitude star, and it would certainly have been noticed. The dust cuts down the light and makes it nineteenth-magnitude, lost among many millions of other faint stars. There was no reason to notice it. No one looked at it. It's in Earth's far southern sky, so that most of the telescopes in pre-Settlement days couldn't even point in that direction."

“And if so, how is it you’ve noticed it?”

“Because of the Far Probe. You see, this Neighbor Star and the Sun are changing position relative to each other, of course. I assume it and the Sun are revolving about a mutual center of gravity very slowly in a period of millions of years. Some centuries ago, the positions may have been such that we could have seen the Neighbor Star to one side of the cloud in its full brightness, but we would still have needed a telescope to see it and telescopes are only some centuries old—less old than that in those places on Earth from which the Neighbor Star would be visible. Some centuries from now, it will be seen clearly again, shining from the other side of the dust cloud. But we don’t have to wait for centuries. The Far Probe did it for us.”

Pitt could feel himself igniting, a distant core of warmth arising within him. He said, “Do you mean that the Far Probe took a picture of that section of the sky containing this Neighbor Star and that the Far Probe was far enough out in space to see around the cloud and detect the Neighbor Star at full brightness?”

“Exactly. We had an eighth-magnitude star where no eighth-magnitude star ought to be and the spectrum was that of a red dwarf. You can’t see red dwarf stars far away, so it had to be pretty close.”

“Yes, but why closer than Alpha Centauri?”

“Naturally, I studied the same area of the sky as seen from Rotor and the eighth-magnitude star wasn’t there. However, fairly near it was a nineteenth-magnitude star that wasn’t present in the photograph taken by the Far Probe. I assumed that the nineteenth-magnitude star was the eighth-magnitude star, obscured, and the fact that they weren’t *exactly* in the same place had to be the result of parallactic displacement.”

“Yes, I understand about that. A nearby object appears to be in different places against the distant background as one views it from different spots.”

“That’s right, but the stars are so distant that even if the Far Probe went out a big fraction of a light-year that change in position wouldn’t produce a noticeable shift in distant stars, but it would in nearby stars. And for this Neighbor Star, it produced a huge shift; I mean comparatively. I checked the sky for different positions of the Far Probe on its journey outward. There were three photographs taken during those intervals when it was in normal space, and the Neighbor Star was progressively brighter as the Probe viewed it farther and farther toward the edge of the cloud. From the parallactic displacement, the Neighbor Star turns out to be at a distance of just over two light-years. It’s at half the distance of Alpha Centauri.”

Pitt looked at her thoughtfully and, in the long silence that followed, she grew restless and uncertain.

“Secretary Pitt,” she said, “do you want to see the data now?”

“No,” he said. “I’m satisfied with what you’ve told me. Now I must ask you some questions. It seems to me, if I understand you correctly, that the chance that someone would concentrate on a nineteenth-magnitude star, and try to get its parallax and determine its distance, is negligible.”

“Just about zero.”

“Is there any other way of noticing that an obscure star must be very near to us?”

“It may have a large proper motion—for a star. I mean that if you watch it steadily, its own motion would change its place in the sky in a more or less straight line.”

“Would that be noticed in this case?”

“It might be, but not all stars have a large proper motion, even if they are close to us. They are moving in three dimensions and we see the proper motion only in a two-dimensional projection. I can explain—”

“No, I’m continuing to take your word for it. Has this star got a large proper motion?”

“That would take some time to determine. I do have a few older pictures of that part of the sky and I could detect an appreciable proper motion. That would need more work.”

“But do you think it has the kind of proper motion that would force itself on astronomers if they just happened by accident to note the star?”

“No, I don’t.”

“Then is it possible that we on Rotor are the only ones who know about this Neighbor Star since we’re the only ones who’ve sent out a Far Probe. This is your field, Dr. Insigna. Do you agree that we’re the only ones who’ve sent out a Far Probe?”

“The Far Probe isn’t entirely a secret project, Mr. Secretary. We’ve accepted experiments from the other Settlements and discussed that part of it with everyone, even Earth, which isn’t too interested in astronomy these days.”

“Yes, they leave it to the Settlements, which is sensible. But have any other Settlements sent out a Far Probe that they *have* kept secret?”

“I doubt that very much, sir. They would need hyper-assistance for that, and we have kept the technique of hyper-assistance *entirely* secret. If they had hyper-assistance, we’d know. They’d have to perform experiments in space that would give the fact away.”

“According to the Open Science Agreement, all data obtained by the Far Probe is to be published generally. Does that mean that you have already informed—”

Insigna interrupted indignantly. “Of course not. I would have to find out a good deal more before I publish. What I have now is only a preliminary result that I’m telling you in confidence.”

“But you are not the only astronomer working on the Far Probe. I presume you’ve shown the results to the others.”

Insigna flushed and looked away. Then she said defensively, “No, I haven’t. I noticed the datum. I followed it up. I worked out its significance. *I*. And I want to make sure I get the credit for it. There is only one star that is nearest to the Sun and I want to be in the annals of science as its discoverer.”

“There might be a still closer one,” and now Pitt permitted himself the first smile of the interview.

“It would have been long known. Even my star would be known but for the very unusual existence of that tiny obscuring cloud. To have another—and closer—star is quite out of the question.”

“Then it boils down to this, Dr. Insigna. You and I are the only ones to know of the Neighbor Star. Am I right? No one else?”

“Yes, sir. Just you and I, so far.”

“Not just so far. It must remain a secret to us until I am prepared to tell certain specific others.”

“But the agreement—the Open Science Agreement—”

“Must be ignored. There are always exceptions to everything. Your discovery involves

Settlement security. If Settlement security is involved, we are not required to make the discovery an open one. We don't make hyper-assistance open, do we?"

"But the existence of the Neighbor Star has nothing to do with Settlement security."

"On the contrary, Dr. Insigna, it does. Perhaps you don't realize it, but you have come upon something that can change the destiny of the human species."

## 5.

She stood there, frozen, staring at him.

"Sit down. We are conspirators, you and I, and we must be friendly. From now on, you are Eugenia to me when we're alone, and I am Janus to you."

Insigna demurred. "I don't think that's proper."

"It will have to be, Eugenia. We can't conspire on frigid, formal terms."

"But I don't want to conspire with anyone about anything, and that's all there is to it. And you don't see the point about keeping secret the facts concerning the Neighbor Star."

"I suppose you are afraid of losing the credit."

Insigna hesitated the merest moment, then said, "You can bet your last computer chip I am Janus. I want my credit."

"For the moment," he said, "forget that the Neighbor Star exists. You know that I've been arguing for quite a while that Rotor ought to leave the Solar System. Where do you stand on that? Would you like to leave the Solar System?"

She shrugged. "I'm not sure. It would be nice to see some astronomical object close up for the first time—but it's a little frightening, too, isn't it?"

"You mean, leaving home?"

"Yes."

"But you wouldn't be leaving home. This is home. Rotor." His arm flipped from side to side. "It would come with you."

"Even so, Mr. Sec— Janus, Rotor isn't all there is to home. We have a neighborhood, the other Settlements, the planet Earth, the whole Solar System."

"It's a crowded neighborhood. Eventually, some of us will have to go, whether we want to or not. On Earth there was once a time when some people had to cross mountain ranges and oceans. Two centuries ago, people on Earth had to leave their planet for Settlements. This is just another step forward in a very old story."

"I understand, but there are some people who never went. There are people who are still on Earth. There are people who've lived in one small region of Earth for countless generations."

"And you want to be one of these nonmovers."

"I think my husband Crile does. He's quite outspoken about your views, Janus."

"Well, we have freedom of speech and thought on Rotor, so he can disagree with me if he pleases. Now here's something else I'd like to ask you. When people generally, on Rotor or elsewhere, think of moving away from the Solar System, where do they think of going?"

"Alpha Centauri, of course. It's the star everyone believes is closest. Even with hyper-assistance, we can't end up going faster than the speed of light on the average, so it would take us four years. Anywhere else, it would take much longer, and four years is long enough to travel."

“Suppose it were possible to travel even faster, and suppose you could reach much farther than Alpha Centauri, where would you go then?”

Insigna paused in thought awhile, then said, “I suppose—still Alpha Centauri. It would still be in the old neighborhood. The stars at night would still seem quite the same. That would give us a comfortable feeling. We would be closer to home, if we wanted to return. Besides Alpha Centauri A, which is the largest of the three-star Alpha Centauri system, is practically twin of the Sun. Alpha Centauri B is smaller, but not too small. Even if you ignore Alpha Centauri C, a red dwarf, you would still have two stars for the price of one, so to speak, two sets of planets.”

“Suppose a Settlement has left for Alpha Centauri and found decent habitability there and settled down to build a new world, and back in the Solar System, it was known that this had happened. Where would the next Settlements go, once *they* decided to leave the Solar System?”

“To Alpha Centauri, of course,” said Insigna without hesitation.

“So the human species would tend to go to the obvious place, and if one Settlement succeeds, others would follow quickly, until the new world was as crowded as the old, until there were many people with many cultures, and eventually many Settlements with many ecologies.”

“Then it will be time to move on to other stars.”

“But always, Eugenia, success in one place will draw other Settlements. A salubrious star, a good planet, will bring others flocking.”

“I suppose so.”

“But if we go to a star that is only a little over two light-years away, only half the distance of Alpha Centauri, and no one knows about it except us, who will follow us?”

“No one, until they find out about the Neighbor Star.”

“But that might take a long time. For that long time, they would all flock to Alpha Centauri, or to any of a few other obvious choices. They would never notice a red dwarf star at their doorstep, or if they did notice it, they would dismiss it as unfit for human life—they didn’t know that human beings had already made it a going concern.”

Insigna stared at Pitt uncertainly. “But what does all this mean? Suppose we go to the Neighbor Star and no one knows about it. What is the advantage?”

“The advantage is that we can fill the world. If there is a habitable planet—”

“There won’t be. Not around a red dwarf star.”

“Then we can use whatever raw material that exists there to build any number of Settlements.”

“You mean there would be more room for us.”

“Yes. Much more room than if they came flocking in after us.”

“So we would have a little more time, Janus. Eventually we would fill the room available for us at the Neighbor Star, even if we were alone. So it would take us five hundred years instead of two hundred. What difference would that make?”

“All the difference you can imagine, Eugenia. Let the Settlements crowd in as they wish and we will have a thousand different cultures, bringing with them all the hatreds and misfittings of Earth’s dismal history. Give us time to be here alone and we can build a system of Settlements that will be uniform in culture and ecology. It will be a far better situation—”

less chaotic, less anarchic.”

“Less interesting. Less variegated. Less alive.”

“Not at all. We’ll diversify, I’m sure. The different Settlements will have their differences but there will, at least, be a common base from which those differences will spring. It will be a far better group of Settlements for that. And even if I am wrong, surely you see that it’s an experiment that must be tried. Why not devote one star to such a reasoned development and see if it works? We can take one star, a red dwarf throwaway that no one would be ordinarily interested in, and use it to see if we can build a new kind of society and possibly a better one.

“Let us see what we can do,” he went on, “if we don’t have our energies worn out and broken by useless cultural differences, and our overall biology constantly perverted by alien ecological inroads.”

Insigna felt herself moved. Even if it didn’t work, humanity would have learned something—that this wouldn’t work. And if it *did* work?

But then she shook her head. “It’s a useless dream. The Neighbor Star will be independent and discovered, no matter how we try to keep it secret.”

“But how much of your own discovery, Eugenia, was accidental? Be truthful now. You just happened to notice the star. You just happened to compare it with what you could see on another map. Might you not have missed it altogether? And might not others have missed it under similar circumstances?”

Insigna did not answer, but the expression on her face was satisfactory to Pitt.

His voice had grown softer, almost hypnotic. “And if there is a delay of only a hundred years. If we are given only a hundred years to ourselves to build our new society, we would be large enough and strong enough to protect ourselves and make the others pass by and go on to other worlds. We won’t have to hide any longer than that.”

Again Insigna did not answer.

Pitt said, “Have I convinced you?”

She seemed to shake herself. “Not entirely.”

“Then think about it, and I’ll ask you just one favor. While you think about it, don’t say a word to anyone about the Neighbor Star and let me have all the data in connection with it for safekeeping. I won’t destroy it. My promise. We will need it if we are going to go to the Neighbor Star. Will you go that far at least, Eugenia?”

“Yes,” she said at last in a small voice. Then she fired up. “One thing, though. I must be able to name the star. If I give it a name, then it’s my star.”

Pitt smiled briefly. “What do you want to call it? Insigna’s Star? Eugenia’s Star?”

“No. I’m not *that* foolish. I want to call it Nemesis.”

“Nemesis? N-E-M-E-S-I-S?”

“Yes.”

“But why?”

“There was a brief period of speculation back in the late twentieth century about the possibility of a Neighbor Star for the Sun. It came to nothing at that time. No Neighbor Star was found, but it had been referred to as ‘Nemesis’ in the papers devoted to it. I would like to honor those daring thinkers.”

“Nemesis? Wasn’t there a Greek goddess of that name? An unpleasant one?”



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