# **The Imaginary**

Isaac Asimov

The telecaster flashed its fitful signal, while Tan Porus sat by complacently. His sharp, green eyes glittered their triumph, and his tiny body was vibrant with excitement. Nothing could have better indicated the greatness of the occasion than his extraordinary position-Tan Porus had his feet on the desk!

The ‘caster glowed into life and a broad Arcturian countenance frowned fretfully out at the Rigellian psychologist.

“Do you have to drag me here straight from bed, Porus? It’s the middle of the night!”

“It’s broad daylight in this part of the world. Final. But I’ve got something to tell you that’ll make you forget all about sleep.”

Gar Final, editor of the J.G.P.-Journal of Galactic Psychology-allowed a look of alertness to cross his face. Whatever Tan Porus’s faults-and Arcturus knew they were many -he had never issued a false alarm. If he said something great was in the air, it was not merely great-it was colossal!

It was quite evident that Porus was enjoying himself. “Final,” he said, “the next article I send to your rag is going to be the greatest thing you’ve ever printed.”

Final was impressed. “Do you really mean what you say?” he asked idiotically.

“What kind of a stupid question is that? Of course I do. Listen—” There followed a dramatic silence, while the tenseness on Final’s face reached painful proportions. Then came Porus’s husky whisper—”I’ve solved the problem of the squid!”

Of course the reaction was exactly what Porus had expected. There was a blow-up at the other end, and for thirty interesting seconds the Rigellian was surprised to learn that the staid and respectable Final had a blistering vocabulary.

Porus’s squid was a by-word throughout the galaxy. For two years now, he had been fussing over an obscure Draconian animal that persisted in going to sleep when it wasn’t supposed to. He had set up equations and torn them down with a regularity that had become a standing joke with every psychologist in the Federation-and none had explained the unusual reaction. Now Final had been dragged from bed to be told that the solution had been reached-and that was all.

Final ripped out a concluding phrase that all but put the ‘caster out of commission.

Porus waited for the storm to pass and then said calmly, “But do you know how I solved it?”

The other’s answer was an indistinct mumble.

The Rigellian began speaking rapidly. All traces of amusement had left his face and, after a few sentences, all traces of anger left Final’s.

The Arcturian’s expression became one of wide-eyed interest. “No?” he gasped.

“Yes!”

When Porus had finished. Final raced madly to put in rush calls to the printers to delay publication of the coming issue of the J.G.P. for two weeks.

Furo Santins, head of the math department of the University of Arcturus, gazed long and steady at his Sirian colleague.

“No, no, you’re wrong! His equations were legitimate. I checked them myself.”

“Mathematically, yes,” retorted the round-faced Sirian. “But psychologically they had no meaning.”

Santins slapped his high forehead. “Meaning! Listen to the mathematician talk. Great space, man, what have mathematics to do with meaning? Mathematics is a tool and as long as it can be manipulated to give proper answers and to make correct predictions, actual meaning has no significance. I’ll say this for Tan Porus-most psychologists don’t know enough mathematics to handle a slide-rule efficiently, but he knows his stuff.”

The other nodded doubtfully, “I guess so. I guess so. But using imaginary quantities in psychological equations stretches my faith in science just a little bit. Square root of minus one!”

He shuddered. . . .

The seniors’ lounge in Psychology Hall was crowded and a-buzz with activity. The rumor of Porus’s solution to the now-classic problem of the squid had spread fast, and conversation touched on nothing else.

At the center of the thickest group was Lor Haridin. He was young, with but newly acquired Senior status. But as Porus’s assistant he was, under present conditions, master of the situation.

“Look, fellows-just exactly what it’s all about I don’t know. That’s the old man’s secret. All I can tell you is that I’ve got the general idea as to how he solved it.”

The others squeezed closer. “I hear he had to make up a new mathematical notation for the squid,” said one, “like that time we had trouble with the humanoids of Sol.”

Lor Haridin shook his head. “Worse! What made him think of it, I can’t imagine. It was either a brainstorm or a nightmare, but anyway he introduced imaginary quantities-the square root of minus one.”

There was an awful silence and then someone said, “I don’t believe it!”

“Fact!” was the complacent reply.

“But it doesn’t make sense. What can the square root of minus one represent, psychologically speaking? Why, that would mean—” he was doing rapid calculation in his head, as were most of the others—”that the neural synapses were hooked up in neither more nor less than four dimensions!”

“Sure,” broke in another. “I suppose that if you stimulate the squid today, it will react yesterday. That’s what an imaginary would mean. Comet gas! That’s what I say.”

“That’s why you’re not the man Tan Porus is,” said Haridin. “Do you suppose he cares how many imaginaries there are in the intermediate steps if they all square out into minus one in the final solution. All he’s interested in is that they give him the proper sign in the answer-an answer which will explain that sleep business. As for its physical significance, what matter? Mathematics is only a tool, anyway.”

The others considered silently and marveled.

Tan Porus sat in his stateroom aboard the newest and most luxurious interstellar liner and gazed at the young man before him happily. He was in amazing good humor and, for perhaps the first time in his life, did not mind being interviewed by the keen, efficient employees of the Ether Press.

The Ethereporter on his side wondered in silence at the affability of the scientist. From bitter experience, he had found out that scientists, as a whole, detested reporters-and that psychologists, in particular, thought it fun to practice a bit of applied psych on them and to induce killingly amusing -to others-reactions.

He remembered the time that the old fellow from Canopus had convinced him that arboreal life was the greatest good. It had taken twenty men to drag him down from the tree-tops and an expert psychologist to bring him back to normal.

But here was the greatest of them all. Tan Porus, actually answering questions like a normal human being.

“What I would like to know now, Professor,” said the reporter, “is just what this imaginary quantity is all about. That is,” he interposed hastily, “not the mathematics of it-we’ll take your word on that-but just a general idea that the ordinary humanoid can picture. For instance, I’ve heard that the squid has a four-dimensional mind.”

Porus groaned, “Oh, Rigel! Four-dimensional poppycock! To tell the honest truth, that imaginary I used-which seems to have caught the popular fancy-probably indicates nothing more than some abnormality in the squid’s nervous system, but just what, I don’t know. Certainly, to the gross methods of ecology and micro-physiology, nothing unusual has been found. No doubt, the answer would lie in the atomic physics of the creature’s brain, but there I have no hope.” There was a trace of disdain in his voice. “The atomic physicists are too far behind the psychologists to expect them to catch up at this late date.”

The reporter bore down furiously on his stylus. The next day’s headline was clear in his mind: Noted Psychologist Blasts Atomic Physicists!

Also, the headline of the day after: Indignant Physicists Denounce Noted Psychologist!

Scientific feuds were great stuff for the Ether Press, particularly that between psychologists and physicists, who, it was well known, hated each other’s guts.

The reporter glanced up brightly. “Say, Professor, the humanoids of the galaxy are very interested, you know, in the private lives of you scientists. I hope you don’t mind if I ask you a few questions about your trip home to Rigel IV.”

“Go ahead,” said Porus, genially. “Tell them it’s the first time I’m getting home in two years. I’m sort of looking forward to it. Arcturus is just a bit too yellow for my eyes and the furniture you have here is too big.”

“It’s true, isn’t it, that you have a wife at home?”

Porus coughed. “Hmm, yes. Sweetest little woman in the galaxy. I’m looking forward to seeing her, too. Put that down.”

The reporter put it down. “How is it you didn’t bring her to Arcturus with you?”

Some of the geniality left the Rigellian’s face. “I like to be alone when I work. Women are all right-in their place. Besides, my idea of a vacation is one by myself. Don’t put that down.”

The reporter didn’t put it down. He gazed at the other’s little form with open admiration. “Say, Prof, how did you ever get her to stay home, though? I wish you’d tell me the secret” Then, with a wealth of feeling he added, “I could use it!”

Porus laughed. “I tell you, son. When you’re an ace psychologist, you’re master in your own home!”

He motioned the interview to an end and then suddenly grasped the other by the arm. His green eyes were piercingly sharp. “And listen, son, that last remark doesn’t go into the story, you know.”

The reporter paled and backed away. “No, sir; no sir! We’ve got a little saying in our profession that goes: ‘Never monkey around with a psychologist, or he’ll make a monkey of you.’“

“Good! I can do it literally, you know, if I have to.”

The young press employee ducked out hastily after that, wiped the cold perspiration from his brow and left with his story. For a moment, towards the last, he had felt himself hanging on the ragged edge. He made a mental note to refuse all future interviews with psychologists-unless they raised his pay.

Tens of billions of miles out, the pure white orb of Rigel had reached Porus’s eyes, and something in his heart uplifted him.

Type B reaction-nostalgia; conditioned reflex through association of Rigel with happy scenes of youth—

Words, phrases, equations spun through his keen brain, but he was happy in spite of them. And in a little while, the human triumphed over the psychologist and Porus abandoned analysis for the superior joy of uncritical happiness.

He sat up past the middle of the sleep period two nights before the landing to catch first glimpse of Hanlon, fourth planet of Rigel, his home world. Some place on that world, on the shores of a quiet sea, was a little two-story house. A little house-not those giant structures fit only for Arcturians and other hulking humanoids.

It was the summer season now and the houses would be bathed in the pearly light of Rigel, and after the harsh yellow-red of Arcturus, how restful that would be.

And-he almost shouted in his joy-the very first night he was going to insist on gorging himself with broiled tryptex. He hadn’t tasted it for two years, and his wife was the best hand at tryptex in the system.

He winced a little at the thought of his wife. It had been a dirty trick, getting her to stay home the last two years, but it had had to be done. He glanced over the papers before him once more. There was just a little nervousness in his fingers as they shuffled the sheets. He had spent a full day in calculating her reactions at first seeing him after two years’ absence and they were not pleasant

Nina Porus was a woman of untamed emotions, and he would have to work quickly and efficiently.

He spotted her quickly in the crowd. He smiled. It was nice to see her, even if his equations did predict long and serious storms. He ran over his initial speech once more and made a last-minute change.

And then she saw him. She waved frantically and broke from the forefront of the crowd. She was on Tan Porus before he was aware of it and, in the grip of her affectionate embrace, he went limp with surprise.

That wasn’t the reaction to be expected at all! Something was wrong!

She was leading him dexterously through the crowd of reporters to the waiting stratocar, talking rapidly along the way.

“Tan Porus, I thought I’d never live to see you again. It’s so good to have you with me again; you have absolutely no idea. Everything here at home is just fine, of course, but it isn’t quite the same without you.”

Porus’s green eyes were glazed. This speech was entirely uncharacteristic of Nina. To the sensitive ears of a psychologist, it sounded little short of the ravings of a maniac. He had not even the presence of mind to grunt at proper intervals. Frozen mutely in his seat, he watched the ground rush downwards and heard the air shriek backwards as they headed for their little house by the sea.

Nina Porus prattled on gaily-the one normal aspect of her conversation being her ability to uphold both ends of a dialogue with smooth efficiency.

“And, of course, dear, I’ve fixed up an entire tryptex, broiled to a turn, garnished with sarnees. And, oh yes, about that affair last year with that new planet-Earth, do you call it? I was so proud of you when I heard about it. I said—”

And so on and on, until her voice degenerated into a meaningless conglomeration of sounds.

Where were her tears? Where were the reproaches, the threats, the impassioned self-pity?

Tan Porus roused himself to one great effort at dinner. He stared at the steaming dish of tryptex before him with an odd lack of appetite and said, “This reminds me of the time at Arcturus when I dined with the President Delegate—”

He went into details, dilating on the gayety and abandon of the affair, waxing lyrical over his own enjoyment of it, stressing, almost unsubtly, the fact that he had not missed his wife, and finally, in one last wild burst of desperation, mentioning casually the presence of a surprising number of Rigellian females in the Arcturian system.

And through it all, his wife sat smiling. “Wonderful, darling,” she’d say. “I’m so glad you enjoyed yourself. Eat your tryptex.”

But Porus did not eat his tryptex. The mere thought of food nauseated him. With one lingering stare of dismay at his wife, he arose with what dignity he could muster and left for the privacy of his room.

He tore up the equations furiously and hurled himself into a chair. He seethed with anger, for evidently something had gone wrong with Nina. Terribly wrong! Even interest in another man-and for just a moment that had occurred to him as a possible explanation-would not cause such a revolution in character.

He tore at his hair. There was some hidden factor more startling than that-but what it was he had no idea. At that moment Tan Porus would have given the sum total of his worldly possessions to have his wife enter and make one-just one-attempt to snatch his scalp off, as of old.

And below, in the dining room, Nina Porus allowed a crafty gleam to enter her eye.

Lor Haridin put down his pen and said, “Come in!”

The door opened, and his friend, Eblo Ranin, entered, brushed off a corner of the desk and sat down.

“Haridin, I’ve got an idea.” His voice was uncommonly like a guilty whisper.

Haridin gazed at him suspiciously.

“Like the time,” he said, “you set up the booby trap for old man Obel?”

Ranin shuddered. He had spent two days hiding in the ventilator shaft after that brilliant piece of work. “No, this is legitimate. Listen, Porus left you in charge of the squid, didn’t he?”

“Oh, I see what you’re getting at. It’s no go. I can feed the squid, but that’s all. If I as much as clapped my hands at it to induce a color-change tropism, the boss would throw a fit.”

“To space with him! He’s parsecs away, anyway.” Ranin drew forth a two-month old copy of the J.G.P. and folded the cover back. “Have you been following Livell’s experiments at Procyon U.? You know-magnetic fields applied with and without ultra-violet radiation.”

“Out of my field,” grunted Haridin. “I’ve beard of it, but that’s all. What about it?”

“Well, it’s a type E reaction which gives, believe it or not, a strong Fimbal Effect in practically every case, especially in the higher invertebrates.”

“Hmm!”

“Now, if we could try it on this squid, we could—”

“No, no, no, no!” Haridin shook his head violently. “Porus would break me. Great stars and little meteors, how he would break me!”

“Listen, you nut-Porus can’t tell you what to do with the squid. It’s Frian Obel that has final say. He’s head of the Psychological Board, not Porus. All you have to do is to apply for his permission and you’ll get it. Just between us, since that Homo Sol affair last year, he can’t stand the sight of Porus anyway.”

Haridin weakened. “You ask him.”

Ranin coughed. “No. On the whole, perhaps I’d better not. He’s sort of got a suspicion that I set that booby trap, and I’d rather keep out of his way.”

“Hmm. Well-all right!”

Lor Haridin looked as if he had not slept well for a week -which shows that sometimes appearances are not deceiving. Eblo Ranin regarded him with patient kindliness and sighed.

“Look! Will you please sit down? Santin said he would have the final results in today, didn’t he?”

“I know, I know, but it’s humiliating. I spent seven years on higher math. And now I make a stupid mistake and can’t even find it!”

“Maybe it’s not there to find.”

“Don’t be silly. The answer is just impossible. It must be impossible. It must be.” His high forehead creased. “Oh, I don’t know what to think.”

He continued his concentrated attempt to wear out the nap of the rug beneath and mused bitterly. Suddenly he sat down.

“It’s those time integrals. You can’t work with them, I tell you. You look ‘em up in a table, taking half an hour to find the proper entry, and they give you seventeen possible answers. You have to pick the one that makes sense, and- Arcturus help me!-either they all do, or none do! Run up against eight of them, as we do in this problem, and we’ve got enough permutations to last us the rest of our life. Wrong answer! It’s a wonder I lived through it at all.”

The look he gave the fat volume of Helo’s Tables of Time Integrals did not sear the binding, to Ranin’s great surprise.

The signal light flashed, and Haridin leaped to the door.

He snatched the package from the messenger’s hand and ripped open the wrappings frantically.

He turned to the last page and stared at Santin’s final note:

Your calculations are correct. Congratulations- and won’t this knock Porus’s head right off his shoulders! Better get in touch with him at once.

Ranin read it over the other’s shoulder, and for one long minute the two gazed at each other.

“I was right,” whispered Haridin, eyes bulging. “We’ve found something in which the imaginary doesn’t square out. We’ve got a predicted reaction which includes an imaginary quantity!”

The other swallowed and brushed aside his stupefaction with an effort. “How do you interpret it?”

“Great space! How in the galaxy should I know? We’ve got to get Porus, that’s all.”

Ranin snapped his fingers and grabbed the other by the shoulders. “Oh, no, we won’t. This is our big chance. If we can carry this through, we’re made for life.” He shuttered in his excitement. “Arcturus! Any psychologist would sell his life twice over to have our opportunity right now.”

The Draconian squid crawled placidly about, unawed by the huge solenoid that surrounded its tank. The mass of tangled wires, the current leads, the mercury-vapor lamp up above meant nothing to it. It nibbled contentedly at the fronds of the sea fern about it, and was at peace with the world.

Not so the two young psychologists. Eblo Ranin scurried through the complicated set-up in a last-minute effort at checking everything. Lor Haridin helped him in intervals between nail-biting.

“Everything’s set,” said Ranin, and swabbed wearily at his damp brow. “Let her shoot!”

The mercury-vapor lamp went on and Haridin pulled the window curtains together. In the cold red-less light, two green-tinted faces watched the squid closely. It stirred restlessly, its warm pink changing to a dull black in the mercury light

“Turn on the juice,” said Haridin hoarsely.

There was a soft click, and that was all.

“No reaction?” questioned Ranin, half to himself. And then : he held his breath as the other bent closer.

“Something’s happening to the squid. It seems to glow a bit -or is it my eyes?”

The glow became perceptible and then seemed to detach itself from the body of the animal and take on a spherical shape of itself. Long minutes passed.

“It’s emitting some sort of radiation, field, force-whatever you want to call it-and there seems to be expansion with time.”

There was no answer, and none was expected. Again they waited and watched.

And then Ranin emitted a muffled cry and grasped Haridin’s elbow tightly. “Crackling comets, what’s it doing?”

The globular glowing sphere of whatever it was had thrust out a pseudopod. A gleaming little projection touched the swaying branch of the sea-fern, and where it touched the leaves turned brown and withered!

“Shut off the current!”

The current clicked off; the mercury-vapor lamp went out; the shades were parted and the two stared at each other nervously.

“What was it?”

Haridin shook his head. “I don’t know. It was something definitely insane. I never saw anything like it”

“You never saw an imaginary in a reaction equation before, either, did you? As a matter of fact, I don’t think that expanding field was any known form of energy at—”

His breath came out in one long whistling exhalation and he retreated slowly from the tank containing the squid. The mollusc was motionless, but around it half the fern. in the tank hung sere and withered.

Haridin gasped. He pulled the shades and in the gloom, the globe of glowing haze bulked through half the tank. Little curving tentacles of light reached toward the remaining fem and one pulsing thread extended through the glass and was creeping along the table.

That fright in Ranin’s voice rendered it a cracked, scarcely-understood sound.

“It’s a lag reaction. Didn’t you test it by Wilbon’s Theorem?”

“How could I?” The other’s heart pumped madly and his dry lips fought to form words. “Wilbon’s Theorem didn’t make sense with an imaginary in the equation. I let it go.”

Ranin sped into action with feverish energy. He left the room and was back in a moment with a tiny, squealing, squirrel-like animal from his own lab. He dropped it in the path of the thread of light stealing along the table, and held it there with a yard rule.

The glowing thread wavered, seemed to sense the presence of life in some horribly blind way, and lunged towards it The little rodent squealed once, a high-pitched shriek of infinite torture, and went limp. In two seconds it was a shriveled, shrunken travesty of its former self.

Ranin swore and dropped the rule with a sudden yell, for the thread, of light-a bit brighter, a bit thicker-began creeping up the wood toward him.

“Here,” said Haridin, “let’s end this!” He yanked a drawer open and withdrew the chromium-plated Tonite gun within. Its sharp thin beam of purple light lunged forward towards the squid and exploded in blazing, soundless fury against the edge of the sphere of force. The psychologist shot again and again, and then compressed the trigger to form one continuous purple stream of destruction that ceased only when power failed.

And the glowing sphere remained unharmed. It engulfed the entire tank. The ferns were brown masses of death.

“Get the Board,” yelled Ranin. “It’s beyond us entirely!”

There was no confusion-humanoids in the mass are simply not subject to panic, if you don’t count the half-genius, half-humanoid inhabitants of the planets of Sol-and the evacuation of the University grounds was carried out smoothly.

“One fool,” said old Mir Deana, ace physicist of Arcturus U., “can ask more questions than a thousand wise men can answer.” He fingered his scraggly beard and his button nose sniffed loudly in disdain.

“What do you mean by that?” questioned Frian Obel sharply. His green Vegan skin darkened angrily.

“Just that, by analogy, one cosmic fool of a psychologist can make a bigger mess than a thousand physicists can clear up.”

Obel drew in his breath dangerously. He had his own opinion of Haridin and Ranin, but no lame-brain physicist could—

The plump figure of Qual Wynn, university president, came charging down upon them. He was out of breath and spoke between puffs.

“I’ve gotten in touch with the Galactic Congress and they’re arranging for evacuation of all Eron, if necessary.” His voice became pleading. “Isn’t there anything that can be done?’’

Mir Deana sighed, “Nothing-yet! All we know is this: the squid is emitting some sort of pseudo-living radiatory field which is not electromagnetic in character. Its advance cannot be stopped by anything we have yet tried, material or vacuum. None of our weapons affect it, for within the field the ordinary attributes of space-time apparently don’t hold.”

The president shook a worried head. “Bad, bad! You’ve sent for Porus, though?” He sounded as though we were clutching at a last straw.

“Yes,” scowled Frian Obel. “He’s the only one that really knows that squid. If he can’t help us, no one can.” He stared off toward the gleaming white of the university buildings, where the grass over half the campus was brown stubble and the trees blasted ruins.

“Do you think,” said the president, turning to Deana once more, “that the field can span interplanetary space?”

“Sizzling novae, I don’t know what to think!” Deana exploded, and he turned pettishly away.

There was a thick silence of utter gloom.

Tan Porus was sunk in deep apathy. He was unaware of the brilliant coruscations of color overhead. He didn’t hear a sound of the melodious tones that filled the auditorium.

He knew only one thing-that he had been talked into attending a concert. Concerts above all were anathema to him, and in twenty years of married life he had steered clear of them with a skill and ease that only the greatest psychologist of them all could have shown. And now—

He was startled out of his stupor by the sudden discordant sounds that arose from the rear.

There was a rush of ushers to the exit where the disturbance originated, a waving of protesting uniformed arms and then a strident voice: “I am here on urgent business direct from the Galactic Congress on Eron, Arcturus. Is Tan Porus in the audience?”

Tan Porus was out of his seat with a bound. Any excuse to leave the auditorium was nothing short of heaven-sent.

He ripped open the communication handed him by the messenger and devoured its contents. At the second sentence, his elation left him. When he was finished, he raised a face in which only his darting green eyes seemed alive.

“How soon can we leave?”

“The ship is waiting now.”

“Come, then.”

He took one step forward and stopped. There was a hand on his elbow.

“Where are you going?” asked Nina Porus. There was hidden steel in her voice.

Tan Porus felt stifled for a moment. He foresaw what would happen. “Darling, I must go to Eron immediately. The fate of a world, of the whole galaxy perhaps, is at stake. You don’t know how important it is. I tell you—”

“All right, go! And I’ll go with you.”

The psychologist bowed his head.

“Yes, dear!” he said. He sighed.

The psychological board hemmed and hawed as one man and then stared dubiously at the large-scale graph before them.

“Frankly, gentlemen,” said Tan Porus, “I don’t feel too certain about it myself, but-well, you’ve all seen my results, and checked them too. And it is the only stimulus that will yield a canceling reaction.”

Frian Obel fingered his chin nervously. “Yes, the mathematics is clear. Increase in hydrogen-ion activity past pH3 would set up a Demane’s Integral and that- But listen, Porus, we’re not dealing with space-time. The math might not hold -perhaps nothing will hold.”

“It’s our only chance. If we were dealing with normal space-time, we could just dump in enough acid to kill the blasted squid or fry it with a Tonite. As it is, we have no choice but to take our chances with—”

Loud voices interrupted him. “Let me through, I say! I don’t care if there are ten conferences going on!”

The door swung open and Qual Wynn’s portly figure made its entrance. He spied Porus and bore down upon him. “Porus, I tell you I’m going crazy. Parliament is holding me, as university president, responsible for all this, and now Deana says that—” He sputtered into silence and Mir Deana, standing composedly behind him, took up the tale.

“The field now covers better than one thousand square miles and its rate of increase is growing steadily. There seems to do no doubt now that it can span interplanetary space if it wishes to do so-interstellar as well, if given the time.”

“You hear that? You hear that?” Wynn was fairly dancing in his anxiety. “Can’t you do something? The galaxy is doomed, I tell you, doomed!”

“Oh, keep your tunic on,” groaned Porus, “and let us handle this.” He turned to Deana. “Didn’t your physicist stooges conduct some clumsy investigations as to the speed of penetration of the field through various substances?”

Deana nodded stiffly.

“Penetration varies, in general, inversely with density. Osmium, iridium and platinum are the best. Lead and gold are fair.”

“Good! That checks! What I’ll need then is an osmium-plated suit with a lead-glass helmet. And make both plating and helmet good and thick.”

Qual Wynn stared horrified. “Osmium plating! Osmium! By the great nebula, think of the expense.”

“I’m thinking,” said Porus frostily..

“But they’ll charge it to the university; they’ll—” He recovered with difficulty as the somber stares of the assembled psychologists fastened themselves upon him. “When do you need it?” he muttered weakly.

“You’re really going, yourself?”

“Why not?” asked Porus, clambering out of the suit.

Mir Deana said, “The lead-glass headpiece will hold off the field not longer than an hour and you’ll probably be getting partial penetration in much shorter time. I don’t know if you can do it.”

“I’ll worry about that.” He paused, and then continued uncertainly. “I’ll be ready in a few minutes. I’d like to speak to my wife first-alone.”

The interview was a short one. It was one of the very few occasions that Tan Porus forgot that he was a psychologist, and spoke as his heart moved him, without stopping to consider the natural reaction of the one spoken to.

One thing he did know-by instinct rather than thought- and that was that his wife would not break down or go sentimental on him; and there he was right. It was only in the last few seconds that her eyes fell and her voice quavered. She tugged a handkerchief from her wide sleeve and hurried from the room.

The psychologist stared after her and then stooped to pick up the thin book that had fallen as she had removed the handkerchief. Without looking at it, he placed it in the inner pocket of his tunic.

He smiled crookedly. “A talisman!” he said.

Tan Porus’s gleaming one-man cruiser whistled into the “death field.” The clammy sensation of desolation impressed itself upon him at once.

He shrugged. “Imagination! Mustn’t get nervy now.”

There was the vaguest glitter-a sparkle that was felt rather than seen-in the air about him. And then it invaded the ship itself, and, looking up, the Rigellian saw the five Eronian ricebirds he had brought with him lying dead on the floor of their cage, huddled masses of bedraggled feathers.

“The ‘death field’ is in,” he whispered. It had penetrated the steel hull of the cruiser.

The cruiser bumped to a rather unskillful landing on the broad university athletic field, and Tan Porus, an incongruous figure in the bulky osmium suit, stepped out. He surveyed his depressing surroundings. From the brown stubble underfoot to the glimmering haze that hid the normal blue of the sky, all seemed-dead.

He entered Psychology Hall.

His lab was dark; the shades were still drawn. He parted them and studied the squid’s tank. The water replenisher was still working, for the tank was full. However, that was the only normal thing about it. Only a few dark-brown, ragged strands of rot were left of what had once been sea-fern. The squid itself lay inertly upon the floor of the tank.

Tan Porus sighed. He felt tired and numbed. His mind was hazy and unclear. For long minutes he stared about him unseeingly.

Then, with an effort, he raised the bottle he held and glanced at the label-12 molar hydrochloric acid.

He mumbled vaguely to himself. “Two hundred cc. Just dump the whole thing in. That’ll force the pH down-if only hydrogen ion activity means something here.”

He was fumbling with the glass stopper, and-suddenly- laughing. He had felt exactly like this the one and only time he had ever been drunk.

He shook the gathering cobwebs from his brain. “Only got a few minutes to do-to do what? I don’t know-something anyway. Dump this thing in. Dump it in. Dump! Dump! Dumpety-dump!” He was mumbling a silly popular song to himself as the acid gurgled its way into the open tank.

Tan Porus felt pleased with himself and he laughed. He stirred the water with his mailed fist and laughed some more. He was still singing that song.

And then he became aware of a subtle change in environment He fumbled for it and stopped singing. And then it hit him with the suddenness of a downpour of cold water. The glitter in the atmosphere had gone!

With a sudden motion, he unclasped the helmet and cast it off. He drew in long breaths of air, a bit musty, but unkilling.

He had acidified the water of the tank, and destroyed the field at its source. Chalk up another victory for the pure mathematics of psychology!

He stepped out of his osmium suit and stretched. The pressure on his chest reminded him of something. Withdrawing the booklet his wife had dropped, he said, “The talisman came through!” and smiled indulgently at his own whimsy.

The smile froze as he saw for the first time the title upon the book.

The title was Intermediate Course in Applied Psychology—Volume 5.

It was as if something large and heavy had suddenly fallen onto Porus’s head and driven understanding into it Nina had been boning up on applied psych for two whole years.

This was the missing factor. He could allow for it. He would have to use triple time integrals, but—

He threw the communicator switch and waited for contact

“Hello! This is Porus! Come on in, all of you! The death field is gone! I’ve beaten the squid.” He broke contact and added triumphantly, “—and my wife!”

Strangely enough-or, perhaps, not so strangely-it was the latter feat that pleased him more.