THE CATSPAW

BY GEORGE O. SMITH

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Thomas Barden slept fitfully. The dream was not nightmare, but it was annoying. It was like the important thought that does not quite struggle up through into consciousness but which remains unformed though the mind is aware of the hidden importance. It was like trying to read small print through a silk screen or to see fine detail through a sheet of florentine glass.

Furthermore it was recurring.

Strangely, Tom Barden seemed to know that there was something strange about the dream, that it was more than just the ramblings of the subconscious mind. He knew that there was something to be gained by permitting the dream to run while he watched, so to speak. But the trouble was that the dream could not run so long as he remained cognizant enough in sleep to make mental notes. When he slept deep enough to permit the strange dream, he was deep enough to lose track of the delicate, and so very alien, train of thought.

The fitful sleep itself was a contributing factor to ultimate success. Since he slept not, he became drowsily tired and found himself lying wide awake time and again with strange semi-daydreams in which conscious thought and dream intermingled in a bizarre fantasy of fact and fiction.

He had been asleep or awake for hours. It was nearing four o'clock in the morning when Tom Barden slipped into a prolonged half-sleep and the dream, as it had before, came again.

He slipped into sleep and in dream, he saw himself luxuriously lounging on a broad couch. Above his head was a draped canopy of silk, its draped folds hanging low in a gorgeous pattern of silken folds. It was gently tinted in delicate colors that blended in a complete lack of regular pattern. It seemed more beautiful for lacking pattern than it could have been with any regularity.

It was none-ending, that canopy. From the draped dome above his couch the silken cyclorama fell in a colorful swirl to the floor where it folded over and over somewhere miles below the couch.

He—was isolated. He was protected. No intrusion could come even though Thomas Barden wanted the intrusion. Certainly if he denied entry, nothing could enter.

And yet he knew that beyond the many layers of flowing silk there was something demanding entry. He could not see nor hear the would-be intruder. He could not even see motion of the silk to show that there was such a being. Yet he seemed to sense it.

And when, finally, the intruder breached the outer layers of shrouding silk, Tom Barden knew it and was glad. Course after course of silken screen was opened by the intruder until finally the silk parted before his eyes and there entered—

Sentience!

It was without form and void.

But it was sentience and it was there for a definite purpose. It came and it hovered over Thomas Barden's broad couch and its thoughts were apparent. It was in communication with another sentience outside—

"I am in."

"Good," was the mental reply, also clear to Thomas Barden. It was not a direct communication from the other. It came relayed through the sentience above his bed, and since he was in direct mental communication with the other, thought and reply were clear also to Barden. "Good," replied the other. "Be quick and be thorough. We may never return!"

"You, sentience, listen for we have too little time. Those of your system are numbered in the billions, and, of them all, you are the only one we have been able to contact though we have tried constantly for several years.

"As I communicate with you, your subconscious mind is being filled with a specialized knowledge of a science new to you. This science is not foreign to you, for it would normally follow the paths of discovery, yet you are not quite ready to discover it for yourselves. We give it to you, knowing that it will only speed up your advancement and it will not cause a passed-over space in the normal trend of advancing technology."

"Why are you giving this to us?" demanded Barden.

"A natural caution. You fear the complete altruist. I'll explain. This science will enable you to develop your spacecraft drive into a means of interstellar travel. This science is known to us. We are using it now. However, there is a political difficulty on our world. We have two factions. One faction wants conquest and subjugation of all systems that are less fortunate in their sociological and technological development. The other faction believes that any kind of subjugation of another people will lead to war upon war in pyramiding terror. I and my friends are members of this second

belief. Since the first group has control, they are preparing to sweep out from our system with their ideal in force. The only way that subjugation of your race, complete with the attending strife, may be stopped is for you to have the same technological developments. Once you meet us as an equal, thoughts of enslaving you can not exist."

"Logical," admitted Barden.

"This science is entering your subconscious mind. It will not be clear to you for many days. I'd suggest rest and contemplation, but not heavy concentration. Learning is a matter of accepting facts and filing them logically in the subconscious mind. Unlike a course of study where fact follows fact, this knowledge is being poured in at high speed. Your subconscious mind is very much like a librarian who has just received a complete file of facts on a new world. Unfortunately these facts must be evaluated in terms of your own world and your own thought. After evaluation, they must be filed in the proper order. The subconscious never sleeps, but it will take time before the logical order is complete. At that time you will be able to speak with authority on the subject."

"I hope," replied Barden.

"You must! For we have had enough of war and talk of war. War is never fought between peoples who respect one another's ability. Take this knowledge and use it. And some day when you get the honest chance, pass it along to another race so that all men can be equal throughout the galaxy!"

The outsider made swift thought: "Quickly, for the veil thickens!"

"I must go. It would be dangerous for us both if I am trapped here when the veil closes. Just remember the billions of your men and the constant attempt to penetrate the mind of any one of them. Even this was sheer chance and it is failing—"

The sentience withdrew after a warning cry from the one on the outside. The silken screen closed, joined, and flowed to the floor without scar.

Barden was once more alone, protected, isolated.

Three weeks. It took Barden three long weeks. He awoke after the initial contact with the alien, and following the alien's advice, considered the matter coolly. It might be true and it might be a dream, but the fitfulness of his nature was gone. Barden then turned over and entered the sleep of the just for nine hours. After this awakening, he contemplated the dream and found it true.

Amazement at the accomplished fact was high, but the flood of knowledge occupied Barden's attention. Things kept coming up out of the dark in his mind that made little sense; other things were clear and sharp and Barden wondered whether these had ever been tried on Terra. They seemed so logical. Then as the days passed, these disconnected facts began to match together. The matrix of knowledge became less broken as the days went by, and—

At the end of three weeks, the sentience was proven correct. Thomas Barden knew, and he knew that he knew the last detail of a new science.

His only problem was getting this science into operation before the alien world could come—

He was all alone in this. No one on earth would believe his wild tale. They'd lay it to a nightmare and offer him medical advice. If he persisted, Thomas Barden would be writing his equations on the walls of a padded cell with a blunt crayon when the alien horde came.

And to walk into the Solar Space Laboratory and tell them he had a means of interstellar travel, complete with facts and figures would get him the same reception as the Brothers Wright, Fulton, and a horde of others. He would be politely shown the door and asked to go away and not bother them with wildness.

If he had time, he could declare the discovery of a phenomenon and offer it to the scientific world. Then step by step he could lead them all in the final disclosures, or even after a few discoveries had been turned over, he could act the part of a genius and force their hands by making great strides. He had too little time.

If he were wealthy, he could set up his own laboratory and gain recognition by proof. To go to work for another laboratory would mean that he would be forced to do work that he felt unimportant for sufficient a period to gain the confidence of his superiors. To be his own boss in his own laboratory would mean that he would not be required to follow other lines of research; he could do things that would seem downright idiotic to those uninformed of the new science. That plus the fact that not one of the large laboratories would care to spend a small fortune on the cold predictions of a young unknown.

Thomas Barden wondered just how many men had found themselves hating the everlasting Time and Money factors before. A fine future!

Barden pondered the problem for almost a week. That made a total of four weeks since the incident.

Then came a partial solution. He was an associate member of the Terran Physical Society. He could prepare a paper, purely theoretical in nature, and disclosing the basis for the new science. It would be treated with skepticism by most of the group, and such a wild-eyed idea might even get him scorn.

Yet this was no time to think of Thomas Barden and what happened to him. This was time to do something bold. For all the men of science who would hear of his theory, a few of them might try. If they tried one experiment, they would be convinced. Once convinced, he would be given credit.

The paper could not be very long. A long paper would be thrown out for divers reasons. A very short, terse paper might get by because it would show the logical development of thought. The reviewing members might think it sheer sophistry, but might allow it if for no other reason than to show how sophistic reasoning could build up a complete technology.

Barden began to make notes. A five-minute paper, packed with explosive details. He selected this fact and that experiment, chosen for their simplicity and their importance, and began to set them down.

His paper was ten pages long, filled with complex equations and terse statements of the results of suggested experiments. He sent it in to the reviewing board and then returned to his studies. For he would have to wait again.

Barden faced the reviewing board exactly eight weeks after the dream. By this time he was getting resigned to waiting. Also the hysteria that made him want immediate action was beginning to die in the face of logic. Obviously the alien culture was not on the verge of heading Solward or the alien mind would have told him that fact. He did mention that there was little time, but the alien would not have bothered if imminent disaster threatened.

Barden believed that the alien was cognizant of the difficulties of introducing a new science to a skeptical world—especially when done by an unknown. Perhaps if the famed Dr. Edith Ward had received the science, a word from her would have sent the men of all Terra, Venus and Mars scurrying to make their own experiments. Of course, Dr. Ward was head of the Solar Space Laboratory and could write high-priority orders for anything short of complete utilization of Luna. She would not require disclosure to have her theories recognized.

Tom Barden wished that she were a member of the reviewing board, for then she might be directly interested. But he noted with some satisfaction that the Laboratory was represented. He faced the chairman confidently, though within him he was praying for a break.

"Mr. Barden," said the chairman, "you are not familiar with us. Introductions are in order. From left to right, are Doctors Murdoch, Harrison, and Jones. I am Edward Hansen, the chairman of this reviewing board. Gentlemen, this is Thomas Barden. You have read his brochure?"

There was a nod of assent.

"We have called you to ask a few questions," said the chairman.

"Gladly," said Barden. At least they were considering it. And so long as it was receiving consideration, it was far better than a complete rejection.

"This is, I take it, an experiment in sheer semantic reasoning?"

"It is more than that," said Barden slowly. "Not only is the reasoning logical when based upon the initial presumption, but I am firm in the belief that the initial presumption is correct."

Dr. Murdoch laughed. "I hope you'll pardon me, Mr. Barden. I'm rude, but it strikes me that you are somewhat similar to the prophet who sneers at the short-range predictions and prefers to tell of things that lie a hundred years in the future. By which I mean that testing out any one of your theories here would require the expenditure of a small fortune. The amount to be spent would be

far in excess of any practical laboratory's budget unless some return is expected."

"If the premise proves true, though," said Barden, "the returns would be so great as to warrant any expenditure."

"Agreed," said Murdoch. "Agreed. Just show me proof."

"It is all there."

"Mathematical proof? The only proof of valid mathematics is in the experimental data that agrees. And may I add that when experiment and math do not agree, it is the math that gets changed. As witness Galileo's results with the freely falling bodies."

Barden nodded slowly. "You mean that mathematics alone is no proof."

"Precisely. Figures do not lie but liars can often figure. No offense, Barden. I wouldn't accuse any man of willful lying. But the math is a lie if it is based on a false premise."

"You have no experimental data at all?" asked Harrison.

Murdoch looked at Harrison and smiled tolerantly.

"Since Mr. Barden is not independently wealthy he could hardly have made any experiments," said Murdoch.

Dr. Hansen looked at Barden and said: "I believe that you have stumbled upon this line of reasoning by sheer accident and so firm is your belief in it that you are making an attempt to have it tried?"

Barden smiled. "That is exactly right," he said earnestly.

"I do admire the semantic reasoning," said Hansen. "I am admittedly skeptical of the premise. Dr. Jones, you represent the Space Laboratory. This seems to be right in your department. What is your opinion?"

"If his theory is correct, great returns are obvious. However, I am inclined to view the idea as a matter of sophistic reasoning."

Barden hastened to get Dr, Jones' attention. "Look, sir. The same relegation of a theory to sophistic reasoning has happened before. Admittedly this is a new science. So have been several others. Someone must discover them in one way or another. The entire science of electronics was discovered in this way—Maxwell formulated the electromagnetic equations. Hertz made the initial experiments many years later. Marconi reduced them to practice, and then a horde of others came forth with their own contributions. Yet the vast technical holdings throughout the electronic field were initially based upon the mathematical predictions made by Maxwell."

"You seem well trained in logic and reasoning," smiled Hansen. "That was a rather sharp parallel. Yet you must understand our feelings in the matter. First, Maxwell was an accredited scientist before he formulated the famous Equations. Now if—and remember that big if—*if* this is a truly parallel case, we'd all like nothing better than to give you the acclaim you deserve. On the other hand, you expect us to foster you in your attempt to have millions spent on the experimentation you outline so logically. You must remember, Mr. Barden, that despite the fact that we, none of us, will have a prime function in the disbursement of any funds, we are none the less a primely responsible body. The fact that we permit you to speak will carry much weight. It will be a

recommendation by us to the rest of the members. As such we must be cautious."

"Is there no way for an unknown man to make a contribution to science?" asked Barden.

"Of course. Produce one shred of evidence by experimentation."

"The cost!" exploded Barden. "You admit that every piece of equipment will require special construction. There is nothing in the solar system at the present time that will be useful."

"All of which makes us skeptical."

Murdoch spoke up: "We're not accusing you of trying to perpetrate a hoax. You must admit, however, that it is quite possible for any man to be completely carried away by his own theories. To believe in them thoroughly, even to the point of despising any man who does not subscribe to the same belief."

"That I do admit. However, gentlemen, I implore you to try. What can you lose?"

Hansen smiled wistfully. "About three million dollars."

"But think of the results."

Hansen's wistful expression increased. "We're all thinking of the result of dropping about three million dollars at the theory of a young, unknown man. It's a wild gamble, Mr. Barden. We're betting our reputations on ten pages of mathematics and very excellent logic. Can you think of what our reputations would be if your predictions were false?"

"But they are not."

Murdoch interrupted. "How do you know?" he said flatly.

"I have—"

"Wait," interrupted Murdoch again. "Please do not define X in terms of X. It isn't done except in very cheap dictionaries. You see, Mr. Barden, you are very earnest in your belief—for which we commend you. However self-determination is not enough to produce a science. Give us a shred of proof."

"Have you reviewed my mathematics?" demanded Barden.

"Naturally. And we find your mathematics unimpeachable. But an equation is not a flat statement of fact in spite of what they tell you. It is not even an instrument until you deduce from the equation certain postulates."

"But—

"I'll give an example. The simplest form of electronic equation is Ohm's Law. Resistance equals Voltage divided by Current. Or, simpler: E equals IR. That has been proven time and again by experiment. Your equations are logical. Yet some of your terms are as though we were working with Ohm's Law without ever having heard of resistance as a physical fact in the conduction of electricity. Your whole network of equations is sensible, but unless you define the terms in the present-day terminology, we can only state that your manipulation of your mathematics is simple symbolic logic. You state that if P implies notQ, such is so—and then neglect to state what notQ is, and go on to state what you can do with P. Unless we know your terms, we can't even state whether you are dividing by real or unreal factors."

"I see that you are unimpressed."

"Not at all. We hoped that you might have had some experimental evidence. Lacking anything material to support your theory—" Hansen spread out his hands in a gesture of frustration.

"Then I've been wasting my time—and yours?"

"Not entirely. Will you speak on your paper as an experiment in sheer semantics?"

Barden considered. Perhaps if this could be presented as such it would be better than no presentation at all. Let them think him a crackpot. He'd win in the end. He would give his talk on the basis mentioned and then if there were any discussion afterwards he might be able to speak convincingly enough to start a train of thought.

"I'll do it," he said.

"Good," said Hansen. "The ability to think in semantic symbols is valuable, and every man could use a better grasp of abstract thought. Your paper will be presented next week, here. We'll put you on the schedule for one o'clock."

Confidently, Tom Barden faced the sectional group of the Terran Physical Society and made his talk. He noted the interest present on every one of the eighty-nine faces. He prayed for a good reception, for he might be asked to present this paper at the international meeting, later. He felt that he was getting an excellent reception, for he had their interest.

He finished his speech and sat down. A buzz filled the room during the recess before discussion, and Barden saw with considerable interest that heads were nodding eagerly. Then the chairman rapped with his gavel.

"There will now be an open discussion," he said.

The buzz stopped.

"Any questions?" asked Chairman Hansen.

A hand went up near the back, and was recognized.

"I am Martin Worthington. I wish to state that the logic is excellent and the delivery was superb. May I ask if the pursuit of such impeccable logic is a matter of training, logical instinct, or by sheer imaginative power, did Mr. Barden momentarily convince himself of the truth of his premise and build up on that basis?"

Barden smiled. "The latter is true. Also, Mr. Worthington, I am still convinced of the truth of the basic premise."

The hall rang with laughter.

When it died, Barden continued. "Not only am I convinced of the validity of this theory, but I am willing to give all I have or ever hope to have for a chance to prove its worth."

"Then," said Worthington, "we are not so much to be impressed by the excellence of semantic reasoning as we have been. True sophistry is brilliant when the reasoner admits that his basic premise is false. Sophistry is just self-deception when the entire pattern is a firm conviction of the reasoner."

The crowd changed from amusement to a slight anger. The speaker, Barden, had not presented a bit of sheer reasoning. He had been talking on a theme which he firmly believed in!

Another hand went up and was recognized. "I am William Hendricks. May I ask if the speaker has any proof of the existence of such phenomena?"

"Only the mathematical proof presented here—and a more complete study at home. These were culled from the larger mass as being more to the point. It is my belief that the force-fields indicated in equation one may be set up, and that they will lead to the results shown in equation three."

"But you have no way of telling?"

"Only by mathematical prediction."

A third hand went up. A slender hand that was instantly recognized as that of Dr. Edith Ward.

"I wish to clarify a point," she said. "Mr. Barden's logic is impeccable, but it *is* based upon one false premise."

Barden looked at the woman carefully. No one could call her beautiful, but there was a womanly charm about her that was in sharp contrast to the cold facts she held in her brain. She looked about thirty years old, which included the mental adjustment necessary to compare her with a younger woman. That she was the head of the Solar Space Laboratory was in itself a statement of her ability as a physicist.

And the fact that she condemned his beliefs was as final as closing the lid and driving in the nails.

Period!

"I believe that my own belief is as firm as Miss Ward's," retorted Barden.