

The Devil and Simon Flagg

by Arthur Porges

The Devil is a great one for riddle games. Sometimes he will appear and, without even making a decent offer for your soul, he will start asking you questions, and if you cannot answer them he will carry you off.

One of the earliest British ballads is "The False Knight on the Road," which is a question and-answer dialogue that begins:

"O where are you going?"
Quoth the false knight on the road.
"I'm going to the school,"
Quoth the wee boy, and still he stood.

Folk-lorists tell us that the false knight is the Devil, but the steadfast wee boy bests him. In many Scandinavian and Baltic legends the Devil buys a soul, but agrees to let him off if he can answer certain questions, for example, "How far is it from heaven to earth?" There are two answers given to that one, "You ought to know, for you fell the distance," a reply which apparently satisfies the Devil, and the other, "One step, for my grandfather has one foot in the grave and one in heaven."

Another situation is the converse of this: the mortal is let off if he can ask the Devil a question he cannot answer, or set him a task he cannot perform.

After several months of the most arduous research, involving the study of countless faded manuscripts, Simon Flagg succeeded - in summoning the devil. As a competent medievalist, his wife had proved invaluable. A mere mathematician himself, he was hardly equipped to decipher Latin holographs, particularly when complicated by rare terms from tenth-century demonology, so it was fortunate that she had a flair for such documents.

The preliminary skirmishing over, Simon and the devil settled down to bargain in earnest. The devil was sulky, for Simon had scornfully declined several of his most dependable gambits, easily spotting the deadly barb concealed in each tempting bait.

"Suppose you listen to a proposition from me for a change," Simon suggested finally. "At least, it's a straightforward one."

The devil irritably twirled his tail-tip with one hand, much as a man might toy with his key chain. Obviously, he felt injured.

"All right," he agreed, in a grumpy voice. "It can't do any harm. Let's hear your proposal."

"I will pose a certain question," Simon began, and the devil brightened, "to be answered within twenty-four hours. If you cannot do so, you must pay me \$100,000. That's a modest request compared to most you get. No billions, no Helen of Troy on a tiger skin. Naturally there must be no reprisals of any kind if I win."

"Indeed!" the devil snorted. "And what are your stakes?"

"If I lose, I will be your slave for any short period. No torment, no loss of soul - not for a mere \$100,000. Neither will I harm relatives or friends. Although," he amended thoughtfully, "there are exceptions."

The devil scowled, pulling his forked tail petulantly. Finally, a savage tug having brought a grimace of pain, he desisted.

"Sorry," he said flatly. "I deal only in souls. There is no shortage of slaves. The amount of free, wholehearted service I receive from humans would amaze you. However, here's what I'll do. If I can't answer your question in the given time, you will receive not a paltry \$100,000, but any sum within reason. In addition, I offer health and happiness as long as you live. If I do answer it - well, you know the consequences. That's the very best I can offer." He pulled a lighted cigar from the air and puffed in watchful silence.

Simon stared without seeing. Little moist patches sprang out upon his forehead. Deep in his heart he had known what the devil's only terms would be. Then his jaw muscles knotted. He would stake his soul that nobody-man, beast, or devil-could answer this question in twenty-four hours.

"Include my life in that health and happiness provision, and it's a deal," he said. "Let's get on with it."

The devil nodded. He removed the cigar stub from his mouth, eyed it distastefully, and touched it with a taloned forefinger. Instantly it became a large pink mint, which he sucked with noisy relish.

"About your question," he said, "it must have an answer, or our contract becomes void. In the Middle Ages, people were fond of proposing riddles. A few came to me with paradoxes, such as that one about a village with one barber who shaves all those, and only those, who don't shave themselves. 'Who shaves the barber?' they asked. Now, as Russell has noted, the 'all' makes such a question meaningless and so unanswerable."

"My question is just that - not a paradox," Simon assured him.

"Very well. I'll answer it. What are you smirking about?"

"Nothing," Simon replied, composing his face.

"You have very good nerves," the devil said, grimly approving, as he pulled a parchment from the air. "If I had chosen to appear as a certain monster which combines the best features of your gorilla with those of the Venusian Greater Kleep, an animal - I suppose one could call it that of unique eye appeal, I wonder if your aplomb-

"You needn't make any tests," Simon said hastily. He took the proffered contract, and satisfied that all was in order, opened his pocket-knife.

"Just a moment," the devil protested. "Let me sterilize that; you might get infected." He held the blade to his lips, blew gently, and the steel glowed cherry red., "There you are. Now a touch of the point to some-ah-ink, and we're all set. Second line from the bottom, 'please; the last one's mine."

Simon hesitated, staring at the moist red tip.

"Sign," urged the devil, and squaring his shoulders, Simon did so.

When his own signature had been added with a flourish, the devil rubbed his palms together, gave Simon a frankly proprietary glance, and said jovially: "Let's have the question. As soon as I answer it, we'll hurry off. I've just time for another client tonight."

"All right," said Simon. He took a deep breath. "My question is this: Is Fermat's Last Theorem correct?"

The devil gulped. For the first time his air of assurance weakened.

"Whose last what?" he asked in a hollow voice.

"Fermat's Last Theorem. It's a mathematical proposition which Fermat, a seventeenth-century French mathematician, claimed to have proved. However, his proof was never written down, and to this day nobody knows if the theorem is true or false." His lips twitched briefly as he saw the devil's expression. "Well, there you are-go to it!"

"Mathematics!" the devil exclaimed, horrified. "Do you think I've had time to waste learning such stuff? I've studied the Trivium and Quadrivium but as for algebra-say," he added resentfully, "what kind of a question is that to ask me?"

Simon's face was strangely wooden, but his eyes shone. "You'd rather run 75,000 miles and bring back some object the size of Boulder Dam, I suppose!" he jeered. "Time and space are easy for you, aren't they? Well, sorry. I prefer this. It's a simple matter," he added, in a bland voice. "Just a question of positive integers."

"What's a positive integer?" the devil flared. "Or an integer, for that matter?"

"To put it more formally," Simon said, ignoring the devil's question, "Fermat's Theorem states that there are no nontrivial, rational solutions of the equation $X^n + Y^n = Z^n$ for n a positive integer greater than two."

"What's the meaning of -"

"You supply the answers, remember."

"And who's to judge-you?"

"No," Simon replied sweetly. "I doubt if I'm qualified, even after studying the problem for years. If you come up with a solution, we'll submit it to any good mathematical journal, and their referee will decide. And you can't back out - the problem obviously is soluble: either the theorem is true, or it is false. No nonsense about multivalued logic, mind. Merely determine which, and prove it in twenty-four hours. After all, a man-excuse me-demon, of your intelligence and vast experience surely can pick up a little math in that time."

"I remember now what a bad time I had with Euclid when I studied at Cambridge," the devil said sadly. "My proofs were always wrong, and yet it was all obvious anyway. You could see just by the diagrams." He set his jaw. "But I can do it. I've done harder things before.. Once I went to a distant star and brought back a quart of neutronium in just sixteen -"

"I know," Simon broke in. "You're very good at such tricks."

"Trick, nothing!" was the angry retort. "It's a technique so difficult-but never mind, I'm off to the library. By this time tomorrow-"

"No," Simon corrected him. "We signed half an hour ago. Be back in exactly twenty-three point five hours! Don't let me rush you," he added ironically, as the devil gave the clock a startled glance. "Have a drink and meet my wife before you go."

"I never drink on duty. Nor have I time to make the acquaintance of your wife ... now." He vanished.

The moment he left, Simon's wife entered.

"Listening at the door again?" Simon chided her, without resentment.

"Naturally," she said in her throaty voice. "And, darling - I want to know - that question - is it really difficult? Because if it's not - Simon, I'm so worried."

"It's difficult, all right." Simon was almost jaunty. "But most people don't realize that at first. You see," he went on, falling automatically into his stance for Senior Math II, "anybody can find two whole numbers whose squares add up to a square. For example, $3^2 + 4^2 = 5^2$; that is, $9 + 16 = 25$. See?"

"Uh huh." She adjusted his tie.

"But when you try to find two cubes that add up to a cube, or higher powers that work similarly, there don't seem to be any. Yet," he concluded dramatically, "nobody has been able to prove that no such numbers exist. Understand now?"

"Of course." Simon's wife always understood mathematical statements, however abstruse. Otherwise, the explanation was repeated until she did, which left little time for other activities.

"I'll make us some coffee," she said, and escaped.

Four hours later as they sat together listening to Brahms' Third, the devil reappeared.

"I've already learned the fundamentals of algebra, trigonometry, and plane geometry!" he announced triumphantly.

"Quick work," Simon complimented him. "I'm sure you'll have no trouble at all with spherical, analytic, projective, descriptive, and. non-Euclidean geometrics."

The devil winced. "Are there so many?" he inquired in a small voice.'

"Oh, those are only a few." Simon had the cheerful air suited to a bearer of welcome tidings. "You'll like non-Euclidean"," he said mendaciously. "There you don't have to worry about diagrams - they don't tell a thing! And since you hated Euclid anyway -

"With a groan the devil faded out like an old movie. Simon's wife giggled.

"Darling," she sang, "I'm beginning to think you've got him over a barrel."

"Shh," said Simon. "The last movement. Glorious!"

Six hours later, there was a smoky flash, and the devil was back. Simon noted the growing bags under his eyes. He suppressed a grin. "I've learned all those geometrics," the devil said with rim satisfaction. "It's coming easier now. I'm about ready for your little puzzle."

Simon shook his head. "You're trying to go too fast. apparently you've overlooked such basic techniques as calculus, differential equations, and finite differences. Then -, here's -"

"Will I need all those?" the devil moaned. He sat down and knuckled his puffy eyelids, smothering a yawn.

"I couldn't say," Simon replied, his voice expressionless. "But people have tried practically every kind of math there is on that 'little puzzle,' and it's still unsolved. Now, I suggest -" But the devil was in no mood for advice from Simon. This time he even made a sloppy disappearance while sitting down.

"I think he's tired," Mrs. Flagg said. "Poor devil." There was no discernible sympathy in her tones.

"So am I," said Simon. "Let's get to bed. He won't be back until tomorrow, I imagine."

"Maybe not," she agreed, adding demurely, "but I'll wear the black lace-just in case."

It was the following afternoon. Bach seemed appropriate somehow, so they had Landowska on.

"Ten more minutes," Simon said. "If he's not back with a solution by then, we've won. I'll give him credit; he could get a Ph.D. out of my school in one day - with honours! However-"

There was a hiss. Rosy clouds mushroomed sulphurously. The devil stood before them, steaming noisomely on the rug. His shoulders sagged; his eyes were bloodshot; and a taloned paw, still clutching a sheaf of papers, shook violently from fatigue or nerves.

Silently, with a kind of seething dignity, he flung the papers to the floor, where he trampled them viciously with his cloven hoofs. Gradually then, his tense figure relaxed, and a wry smile twisted his mouth.

"You win, Simon," he said, almost in a whisper, eyeing him with ungrudging respect. "Not even I can learn enough mathematics in such a short time for so difficult a problem. The more I got into it, the worse it became. Non-unique factoring, ideals-Baa!! Do you know," he confided, "not even the best mathematicians on other planets-all far ahead of yours-have solved it? Why, there's a chap on Saturn-he looks something like a mushroom on stilts-who solves partial differential equations mentally; and even he's given up." The devil sighed. "Farewell." He dislimned with a kind of weary precision.

Simon kissed his wife-hard. A long while later she stirred in his arms.

"Darling," she pouted, peering into his -abstracted face, "what's wrong now?"

"Nothing except I'd like to see his work; to know how close he came. I've wrestled with that problem for-" He broke off amazed as the devil flashed back. Satan seemed oddly embarrassed.

"I forgot," he mumbled. "I need to-ah!" He stooped for the scattered papers, gathering and smoothing them tenderly. "It certainly gets you," he said, avoiding Simon's gaze.

"Impossible to stop just now. Why, if I could only prove one simple little lemma"

He saw the blazing interest in Simon, and dropped his apologetic air. "Say," he grunted, "you've worked on this, I'm sure. Did you try continued fractions? Fermat must have used them, and-move over a minute, please-" This last to Mrs. Flagg. He sat down beside Simon, tucked his tail under, and pointed to a jungle of symbols.

Mrs. Flagg sighed. Suddenly the devil seemed a familiar figure, little different from old Professor Atkins, her husband's colleague at the university. Any time two mathematicians got together on a tantalizing problem ... Resignedly she left the room, coffee pot in hand. There was certainly a long session in sight. She knew. After all, she was a professor's wife.