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It's been a long time between Besters, so say we all. His last two, Fondly Fahrenheit and the memorable 3,271,009 (F&SF, August and March, respectively, 1934) dealt, as so many Besters have, with the odd and queer, if not downright peculiar, problems of crime. Once more the master picks up his brush to paint the absolutely unexpected: a crime that mulishly refuses to allow itself to be committed, a time-travel paradox that (crowning Besterian paradox!) blithely contains no paradox, and a mad professor who gets saner and saner as the story gets madder and madder. It's been such a long time between Besters!

THE MEN WHO MURDERED MOHAMMED

by ALFRED BESTER

THERE WAS A MAN WHO MUTILATED history. He toppled empires and uprooted dynasties. Because of him, Mount Vernon should not be a national shrine, and Columbus, Ohio should be called Cabot, Ohio. Because of him the name of Marie Curie should be cursed in France, and no one should swear by the beard of the Prophet. Actually, these realities did not happen, because he was a mad professor; or, to put it another way, he only succeeded in making them unreal for himself.

Now the patient reader is too familiar with the conventional

mad professor, undersized and over-browed, creating monsters in his laboratory which invariably turn on their maker and menace his lovely daughter. This story isn't about that sort of make-believe man. It's about Henry Hassel, a genuine mad professor in a class with such better known men as Ludwig Boltzmann (See "Ideal Gas Law"), Jacques Charles, and Andre Marie Ampere (1775-1836).

Everyone ought to know that the electrical ampere was so named in honor of Ampere. Ludwig Boltzmann was a distin-

guished Austrian physicist, as famous for his research on black-body radiation as Ideal Gases. You can look him up in Volume 3 of the Encyclopaedia Britannica, BALT to BRAI. Jacques Alexandre Cesar Charles was the first mathematician to become interested in flight, and he invented the hydrogen balloon. These were real men.

They were also real mad professors. Ampere, for example, was on his way to an important meeting of scientists in Paris. In his taxi he got a brilliant idea (of an electrical nature, I assume) and whipped out a pencil and jotted the equation on the wall of the honson cab. Roughly, it was: $dH = i p dl / r^2$ in which p is the perpendicular distance from P to the line of the element dl ; or $dH = i \sin \phi dl / r^2$. This is sometimes known as Laplace's Law, although he wasn't at the meeting.

Anyway, the cab arrived at the Academie. Ampere jumped out, paid the driver, and rushed into the meeting to tell everybody about his idea. Then he realized he didn't have the note on him, remembered where he'd left it, and had to chase through the streets of Paris after the taxi to recover his runaway equation. Sometimes I imagine that's how Fermat lost his famous "Last Theorem," although Fermat wasn't at the meeting either, having died

some two hundred years earlier.

Or take Boltzmann. Giving a course in Advanced Ideal Gases, he peppered his lectures with involved calculus which he worked out quickly and casually in his head. He had that kind of head. His students had so much trouble trying to puzzle out the math by ear that they couldn't keep up with the lectures, and they begged Boltzmann to work out his equations on the blackboard.

Boltzmann apologized and promised to be more helpful in the future. At the next lecture he began: "Gentlemen, combining Boyle's Law with the Law of Charles, we arrive at the equation $p v = p_0 v_0 (1 + \alpha t)$. Now obviously if $\int S^p = f(x) dx \text{ @ } (a)$, then $p v = RT$ and $\int S f(x, y, z) dV = 0$. It's as simple as two plus two equals four." At this point Boltzmann remembered his promise. He turned to the blackboard, conscientiously chalked $2 + 2 = 4$, and then breezed on, casually doing the complicated calculus in his head.

Jacques Charles, the brilliant mathematician who discovered Charles' Law (sometimes known as Gay-Lussac's Law) which Boltzmann mentioned in his lecture, had a lunatic passion to become a famous paleographer—that is, a discoverer of ancient manuscripts. I think that being forced to share credit with Gay-Lussac may have unhinged him.

He paid a transparent swindler named Vrain-Lucas 200,000 francs for holograph letters purportedly written by Julius Caesar, Alexander the Great, and Pontius Pilate. Charles, a man who could see through any gas, ideal or not, actually believed in these forgeries despite the fact that the maladroit Vrain-Lucas had written them in modern French on modern notepaper bearing modern watermarks. Charles even tried to donate them to the Louvre.

Now these men weren't idiots. They were geniuses who paid a high price for their genius because the rest of their thinking was other-world. A genius is someone who travels to truth by an unexpected path. Unfortunately, unexpected paths lead to disaster in everyday life. This is what happened to Henry Hassel, professor of Applied Compulsion at Unknown University in the year 1980.

Nobody knows where Unknown University is or what they teach there. It has a faculty of some two hundred eccentrics, and a student body of two thousand misfits . . . the kind that remain anonymous until they win Nobel prizes or become The First Man On Mars. You can always spot a graduate of U.U. when you ask people where they went to school. If you get an evasive reply like:

"State," or "Oh, a freshwater school you never heard of," you can bet they went to Unknown. Some day I hope to tell you more about this university which is a center of learning only in the Pickwickian sense.

Anyway, Henry Hassel started home from his office in the Psychotic Pcenter early one afternoon, strolling through the Physical Culture arcade. It is not true that he did this to leer at the nude coeds practicing Arcane Eurythmics; rather, Hassel liked to admire the trophies displayed in the arcade in memory of great Unknown teams which had won the sort of championships that Unknown teams win . . . in sports like Strabismus, Occlusion and Botulism. (Hassel had been Frambesla singles champion three years running.) He arrived home uplifted, and burst gaily into the house to discover his wife in the arms of a man.

There she was, a lovely woman of thirty-five, with smoky red hair and almond eyes, being heartily embraced by a person whose pockets were stuffed with pamphlets, micro-chemical apparatus and a patella reflex hammer . . . a typical campus character of U.U., in fact. The embrace was so concentrated that neither of the offending parties noticed Henry Hassel glaring at them from the hallway.

Now remember Ampere and

Charles and Boltzmann. Hassel weighed one hundred and ninety pounds. He was muscular and uninhibited. It would have been child's play for him to have dismembered his wife and her lover, and thus simply and directly achieve the goal he desired—the end of his wife's life. But Henry Hassel was in the genius class; his mind just didn't operate that way.

Hassel breathed hard, turned and lumbered into his private laboratory like a freight engine. He opened a drawer labelled DUODENUM and removed a .45 caliber revolver. He opened other drawers, more interestingly labelled, and assembled apparatus. In exactly seven and one-half minutes (such was his rage) he put together a time machine (such was his genius).

Professor Hassel assembled the time machine around him, set a dial for 1902, picked up the revolver and pressed a button. The machine made a noise like defective plumbing and Hassel disappeared. He reappeared in Philadelphia on June 3rd, 1902, went directly to No. 1218 Walnut Street, a red brick house with marble steps, and rang the bell. A man who might have passed for the third Smith Brother opened the door and looked at Henry Hassel.

"Mr. Jessup?" Hassel asked in a suffocated voice.

"Yes?"

"You are Mr. Jessup?"

"I am."

"You will have a son, Edgar? Edgar Allan Jessup . . . so named because of your regrettable admiration for Poe?"

The third Smith Brother was startled. "Not that I know of," he said. "I'm not married yet."

"You will be," Hassel said angrily. "I have the misfortune to be married to your son's daughter, Greta. Excuse me." He raised the revolver and shot his wife's grandfather-to-be.

"She will have ceased to exist," Hassel muttered, blowing smoke out of the revolver. "I'll be a bachelor. I may even be married to somebody else. . . . Good God! Who?"

Hassel waited impatiently for the automatic recall of the time machine to snatch him back to his own laboratory. He rushed into his living room. There was his red-headed wife, still in the arms of a man.

Hassel was thunderstruck.

"So that's it," he growled. "A family tradition of faithlessness. Well, we'll see about that. We have ways and means." He permitted himself a hollow laugh, returned to his laboratory, and sent himself back to the year 1901, where he shot and killed Emma Hotchkiss, his wife's maternal grandmother-to-be. He returned to his own home in his own time.

There was his redheaded wife, still in the arms of another man.

"But I know the old bitch was her grandmother," Hassel muttered. "You couldn't miss the resemblance. What the hell's gone wrong?"

Hassel was confused and dismayed, but not without resources. He went to his study, had difficulty picking up the phone, but finally managed to dial the Malpractice Laboratory. His finger kept oozing out of the dial holes.

"Sam?" he said. "This is Henry."

"Who?"

"Henry."

"You'll have to speak up."

"Henry Hassel!"

"Oh, good afternoon, Henry."

"Tell me all about time."

"Time? Hmmm . . ." The Simplex And Multiplex Computer cleared its throat while it waited for the data circuits to link up. "Ahem. Time. (1) Absolute. (2) Relative. (3) Recurrent. (1) Absolute: period, contingent, duration, diurnity, perpetuity—"

"Sorry, Sam. Wrong request. Go back. I want time, reference to succession of, travel in."

Sam shifted gears and began again. Hassel listened intently. He nodded. He grunted. "Uh-huh. Uh-huh. Right. I see. Thought so. A continuum, eh? Acts performed in past must alter future. Then I'm on the right track. But act

must be significant, eh? Mass-action effect. Trivia cannot divert existing phenomena streams. Hmmm. But how trivial is a grandmother?"

"What are you trying to do, Henry?"

"Kill my wife," Hassel snapped. He hung up. He returned to his laboratory. He considered, still in a jealous rage.

"Got to do something significant," he muttered. "Wipe Greta out. Wipe it all out. All right, by God! I'll show 'em."

Hassel went back to the year 1775, visited a Virginia farm and shot a young colonel in the brisket. The colonel's name was George Washington, and Hassel made sure he was dead. He returned to his own time and his own home. There was his redheaded wife, still in the arms of another.

"Damn!" said Hassel. He was running out of ammunition. He opened a fresh box of cartridges, went back in time and massacred Christopher Columbus, Napoleon, Mohammed, and half a dozen other celebrities. "That ought to do it, by God!" said Hassel.

He returned to his own time, and found his wife as before.

His knees turned to water; his feet seemed to melt into the floor. He went back to his laboratory, walking through nightmare quicksands.

"What the hell is significant?"

Hassel asked himself painfully. "How much does it take to change futurity? By God, I'll really change it this time. I'll go for broke."

He traveled to Paris at the turn of the 20th century and visited a Madame Curie in an attic workshop near the Sorbonne. "Madame," he said in his execrable French, "I am a stranger to you of the utmost, but a scientist entire. Knowing of your experiments with radium— Oh? You haven't got to radium yet? No matter. I am here to teach you all of nuclear fission."

He taught her. He had the satisfaction of seeing Paris go up in a mushroom of smoke before the automatic recall brought him home. "That'll teach women to be faithless," he growled. . . . "Guhhh!" The last was wrenched from his lips when he saw his redheaded wife still— But no need to belabor the obvious.

Hassel swam through fogs to his study and sat down to think. While he's thinking I'd better warn you that this is not a conventional time story. If you imagine for a moment that Henry is going to discover that the man fondling his wife is himself, you're mistaken. The viper is not Henry Hassel, his son, a relation, or even Ludwig Boltzmann (1844-1906). Hassel does not make a circle in time, ending where the story begins, to the

satisfaction of nobody and the fury of everybody . . . for the simple reason that time isn't circular, or linear, or tandem, discoid, syzygous, longinquitous, or pandicularated. Time is a private matter, as Hassel discovered.

"Maybe I slipped up somehow," Hassel muttered. "I'd better find out." He fought with the telephone, which seemed to weigh a hundred tons, and at last managed to get through to the library.

"Hello, library? This is Henry."

"Who?"

"Henry Hassel."

"Speak up, please."

"HENRY HASSEL!"

"Oh. Good afternoon, Henry."

"What have you got on George Washington?"

Library clucked while her scanners sorted through her catalogues. "George Washington, first president of the United States, was born in—"

"First president? Wasn't he murdered in 1775?"

"Really, Henry. That's an absurd question. Everybody knows that George Wash—"

"Doesn't anybody know he was shot?"

"By whom?"

"Me."

"When?"

"In 1775."

"How did you manage to do that?"

"I've got a revolver."

"No, I mean, how did you do

it two hundred years ago?"

"I've got a time machine."

"Well, there's no record here," Library said. "He's still doing fine in my files. You must have missed."

"I did not miss. What about Christopher Columbus? Any record of his death in 1489?"

"But he discovered the New World in 1492."

"He did not. He was murdered in 1489."

"How?"

"With a .45 slug in the gizzard."

"You again, Henry?"

"Yes."

"There's no record here," Library insisted. "You must be one lousy shot."

"I will not lose my temper," Hassel said in a trembling voice.

"Why not, Henry?"

"Because it's lost already," he shouted. "All right! What about Marie Curie? Did she or did she not discover the fission bomb which destroyed Paris at the turn of the century?"

"She did not. Enrico Fermi—"

"She did."

"She didn't."

"I personally taught her. Me. Henry Hassel."

"Everybody says you're a wonderful theoretician, but a lousy teacher, Henry. You—"

"Go to hell, you old biddy. This has got to be explained."

"Why?"

"I forget. There was something

on my mind, but it doesn't matter, now. What would you suggest?"

"You really have a time machine?"

"Of course I've got a time machine."

"Then go back and check."

Hassel returned to the year 1775, visited Mount Vernon, and interrupted the spring planting. "Excuse me, Colonel," he began.

The big man looked at him curiously. "You talk funny, stranger," he said. "Where are you from?"

"Oh, a freshwater school you never heard of."

"You look funny, too. Kind of misty, so to speak."

"Tell me, Colonel, what do you hear from Christopher Columbus?"

"Not much," Colonel Washington answered. "Been dead two-three hundred years."

"When did he die?"

"Year Fifteen Hundred some-odd, near as I remember."

"He did not. He died in 1489."

"Got your dates wrong, friend. He discovered America in 1492."

"Cabot discovered America. Sebastian Cabot."

"Nopa. Cabot came a mite later."

"I have infallible proof!" Hassel began, but broke off as a stocky and rather stout man with a face ludicrously reddened by rage, approached. He was wearing baggy

grey slacks and a tweed jacket two sizes too small for him. He was carrying a .45 revolver. It was only after he had stared for a moment that Henry Hassel realized that he was looking at himself and not relishing the sight.

"My God!" Hassel murmured, "it's me, coming back to murder Washington that first time. If I'd made this second trip an hour later, I'd have found Washington dead. Hey!" he called. "Not yet. Hold off a minute. I've got to straighten something out, first."

Hassel paid no attention to himself; indeed, he did not appear to be aware of himself. He marched straight up to Colonel Washington and shot him in the gizzard. Colonel Washington collapsed, emphatically dead. The first murderer inspected the body, and then, ignoring Hassel's attempt to stop him and engage him in dispute, turned and marched off, muttering venomously to himself.

"He didn't hear me," Hassel wondered. "He didn't even feel me. And why don't I remember myself trying to stop me the first time I shot the colonel? What the hell is going on?"

Considerably disturbed, Henry Hassel visited Chicago and dropped into the Chicago University squash courts in the early 1940s. There, in a slippery mess of graphite bricks and graphite dust that coated him, he located an Italian scientist named Fermi.

"Repeating Marie Curie's work, I see, *Dottore?*" Hassel said.

Fermi glanced about as though he had heard a faint sound.

"Repeating Marie Curie's work, *Dottore?*" Hassel roared.

Fermi looked at him strangely. "Where you from, *amico?*"

"State."

"State Department?"

"Just State. It's true, isn't it, *Dottore*, that Marie Curie discovered nuclear fission back in nineteen ought-ought?"

"No! No! No!" Fermi cried. "We are the first, and we are not there yet. Police! Police! Spy!"

"This time I'll go on record," Hassel growled. He pulled out his trusty .45, emptied it into Doctor Fermi's chest, and awaited arrest and immolation in newspaper files. To his amazement, Dr. Fermi did not collapse. Dr. Fermi merely explored his chest tenderly and, to the men who answered his cry, said: "It is nothing. I felt in my within a sudden sensation of burn which may be a neuralgia of the cardiac nerve, but is most likely gas."

Hassel was too agitated to wait for the automatic recall of the time machine. Instead he returned at once to Unknown University under his own power. This should have given him a clue, but he was too possessed to notice. It was at this time that I (1913-1975) first saw him . . . a dim figure tramping through parked cars, closed

doors and brick walls, with the light of lunatic determination on his face.

He oozed into the library, prepared for an exhaustive discussion, but could not make himself felt or heard by the catalogues. He went to the Malpractice Laboratory where Sam, the Simplex And Multiplex Computer, has installations sensitive up to 10,700 angstroms. Sam could not see Henry, but managed to hear him through a sort of wave-interference phenomenon.

"Sam," Hassel said, "I've made one hell of a discovery."

"You're always making discoveries, Henry," Sam complained. "Your data allocation is filled. Do I have to start another tape for you?"

"But I need advice. Who's the leading authority on time, reference to succession of, travel in?"

"That would be Israel Lennox, spatial mechanics, professor of, Yale."

"How do I get in touch with him?"

"You don't, Henry. He's dead. Died in '75."

"What authority have you got on time, travel in, living?"

"Wiley Murphy."

"Murphy? From our own Trauma Department? That's a break. Where is he now?"

"As a matter of fact, Henry, he went over to your house to ask you something."

Hassel went home without walking, searched through his laboratory and study without finding anyone, and at last floated into the living room where his redheaded wife was still in the arms of another man. (All this, you understand, had taken place within the space of a few moments after the construction of the time machine . . . such is the nature of time and time travel.) Hassel cleared his throat once or twice and tried to tap his wife on the shoulder. His fingers went through her.

"Excuse me, darling," he said. "Has Wiley Murphy been in to see me?"

Then he looked closer and saw that the man embracing his wife was Murphy himself.

"Murphy!" Hassel exclaimed. "The very man I'm looking for. I've had the most extraordinary experience." Hassel at once launched into a lucid description of his extraordinary experience which went something like this: "Murphy, $u - v = (u^2 - v^2) (u^2 + u^2v^2 + v^2)$ but when George Washington $F(x)y^2 \odot dx$ and Enrico Fermi $F(u^2)dxdt$ one-half of Marie Curie, then what about Christopher Columbus times the square root of minus one?"

Murphy ignored Hassel, as did Mrs. Hassel. I jotted down Hassel's equations on the hood of a passing taxi.

"Do listen to me, Murphy."

Hassel said. "Greta, dear, would you mind leaving us for a moment? I— For heaven's sake, will you two stop that nonsense? This is serious."

Hassel tried to separate the couple. He could no more touch them than make them hear him. His face turned red again and he became quite choleric as he beat at Mrs. Hassel and Murphy. It was like beating an Ideal Gas. I thought it best to interfere.

"Hassell"

"Who's that?"

"Come outside a moment. I want to talk to you."

He shot through the wall. "Where are you?"

"Over here."

"You're sort of dim."

"So are you."

"Who are you?"

"My name's Lennox. Israel Lennox."

"Israel Lennox, spatial mechanics, professor of, Yale?"

"The same."

"But you died in 75."

"I disappeared in 75."

"What d'you mean?"

"I invented a time machine."

"By God! So did I," Hassel said. "This afternoon. The idea came to me in a flash . . . I don't know why . . . and I've had the most extraordinary experience. Lennox, time is not a continuum."

"No?"

"It's a series of discrete particles . . . like pearls on a string."

"Yes?"

"Each pearl is a 'Now.' Each 'Now' has its own past and future. But none of them relate to any others. You see? If $a = a_1 + a_2j + \text{Oax}(b_1)$ —"

"Never mind the mathematics, Henry."

"It's a form of quantum transfer of energy. Time is emitted in discrete corpuscles or quanta. We can visit each individual quantum and make changes within it, but no change in any one corpuscle affects any other corpuscle. Right?"

"Wrong," I said sorrowfully.

"What d'you mean, 'wrong?'" he said, angrily gesturing through the cleavage of a passing co-ed. "You take the trochoid equations and—"

"Wrong," I repeated firmly.

"Will you listen to me, Henry?"

"Oh, go ahead," he said.

"Have you noticed that you've become rather insubstantial? Dim? Spectral? Space and time no longer affect you."

"Yes?"

"Henry, I had the misfortune to construct a time machine back in 75."

"So you said. Listen, what about power input? I figure I'm using about 7.3 kilowatts per—"

"Never mind the power input, Henry. On my first trip into the past, I visited the Pleistocene. I was eager to photograph the mastodon, the giant ground sloth, and the saber-tooth tiger. While

I was backing up to get a mastodon fully in the field of view at $f/6.3$ at $1/100$ th of a second, or on the LVS scale—

"Never mind the LVS scale," he said.

"While I was backing up, I inadvertently trampled and killed a small Pleistocene insect."

"Ah-ha!" said Hassel.

"I was terrified by the incident. I had visions of returning to my world to find it completely changed as a result of this single death. Imagine my surprise when I returned to my world to find that nothing had changed."

"Oh-ho!" said Hassel.

"I became curious. I went back to the Pleistocene and killed the mastodon. Nothing was changed in 1975. I returned to the Pleistocene and slaughtered the wild life . . . still with no effect. I ranged through time, killing and destroying, in an attempt to alter the present."

"Then you did it just like me," Hassel exclaimed. "Odd we didn't run into each other."

"Not odd at all."

"I got Columbus."

"I got Marco Polo."

"I got Napoleon."

"I thought Einstein was more important."

"Mohammed didn't change things much—I expected more from him."

"I know. I got him, too."

"What do you mean, you got

him too?" Hassel demanded.

"I killed him September 16th, 599. Old Style."

"Why I got Mohammed January 5th, 598."

"I believe you."

"But how could you have killed him after I killed him?"

"We both killed him."

"That's impossible."

"My boy," I said, "time is entirely subjective. It's a private matter . . . a personal experience. There is no such thing as objective time, just as there is no such thing as objective love, or an objective soul."

"Do you mean to say that time travel is impossible? But we've done it."

"To be sure, and many others, for all I know. But we each travel into our own past, and no other person's. There is no universal continuum, Henry. There are only billions of individuals, each with his own continuum; and one continuum cannot affect the other. We're like millions of strands of spaghetti in the same pot. No time traveller can ever meet another time traveller in the past or future. Each of us must travel up and down his own strand alone."

"But we're meeting each other now."

"We're no longer time-travellers, Henry. We've become the spaghetti sauce."

"Spaghetti sauce?"

"Yes. You and I can visit any

strand we like, because we've destroyed ourselves."

"I don't understand."

"When a man changes the past he only affects his own past . . . no one else's. The past is like memory. When you erase a man's memory, you wipe him out, but you don't wipe out anybody else. You and I have erased our past. The individual worlds of the others go on, but we have ceased

to exist." He paused significantly.

"What d'you mean . . . 'ceased to exist?'"

"With each act of destruction we dissolved a little. Now we're all gone. We've committed chronicide. We're ghosts. I hope Mrs. Hassel will be very happy with Mr. Murphy. . . . Now let's go over to the Academie. Ampere is telling a great story about Ludwig Boltzmann."

