The Big Bounce

Tevis, Walter

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About Tevis:

Tevis was born in San Francisco, California. As a child, Walter grew up in San Francisco's Sunset District, near the sea and Golden Gate Park. When he was ten years old, his parents placed him in the Stanford Children's Convalescent home for a year while they returned to Kentucky, where the Tevis family had been given a grant of land in Madison County. At the age of 11, Walter traveled across country alone on a train to rejoin his family. Near the end of World War II, the 17-year-old Tevis served in the Pacific Theater as a Navy carpenter's mate on board the USS Hamilton. After his discharge, he graduated from Model High School in 1945 and entered the University of Kentucky where he received B.A. and M.A. degrees in English literature and studied with A.B. Guthrie, Jr., author of The Big Sky. While a student there, Tevis worked in a pool hall and published a story about pool written for Guthrie's class. After graduation, he wrote for the Kentucky Highway Department and taught everything from the sciences and English to physical education in small town Kentucky high schools (Science Hill, Hawesville, Irvine and Carlisle). He married Jamie Griggs in 1957, and they remained together for 27 years. "The Big Hustle," his pool hall story for Collier's (August 5, 1955), was followed by short stories in Cosmopolitan, Esquire, Galaxy Science Fiction Playboy, Redbook and The Saturday Evening Post. After his first novel, The Hustler (Harper & Row, 1959), he followed with The Man Who Fell to Earth, published in 1963 by Gold Medal Books. He taught English literature and creative writing at Ohio University (in Athens, Ohio) from 1965 to 1978, where he received an MFA. He wrote seven novels, three of which were the basis of major motion pictures of the same names. Two, The Hustler and The Color of Money (1984), were about fictional pool hustler "Fast Eddie" Felson. The Man Who Fell to Earth was filmed in 1976 by Nicolas Roeg and again in 1987 as a TV movie. It has been announced as yet another theatrical film and also as a Broadway musical. He also wrote Mockingbird (1980), Far from Home (1981), The Steps of the Sun (1983), and The Queen's Gambit (1983). Aspects of Tevis' childhood are embedded in The Man Who Fell to Earth, as noted by James Sallis, writing in the Boston Globe: On the surface, Man is the tale of an alien who comes to earth to save his own civilization and, through adversity, distraction, and loss of faith ("I want to… But not enough"), fails. Just beneath the surface, it might be read as a parable of 1950s conventionalism and of the Cold War. One of the many other things it is, in Tevis's own words, is "a very disguised autobiography," the tale of his removal as a child from San Francisco, "the city

of light," to rural Kentucky, and of the childhood illness that long confined him to bed, leaving him, once recovered, weak, fragile, and apart. It was also — as he realized only after writing it — about his becoming an alcoholic. Beyond that, it is, of course, a Christian parable, and a portrait of the artist. It is, finally, one of the most heartbreaking books I know, a threnody on great ambition and terrible failure, and an evocation of man's absolute, unabridgeable aloneness. Tevis was a nominee for the Nebula Award for Best Novel in 1980 for Mockingbird. During one of his last televised interviews, Tevis revealed that PBS once planned a production of Mockingbird as a follow-up to their 1979 film of The Lathe of Heaven. A member of the Authors Guild, Tevis spent his last years in New York City as a full-time writer. He died there of lung cancer in 1984 and is buried in Richmond, Kentucky. His books have been translated into French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Finnish, Icelandic, Greek, Slovak, Serbo-Croatian, Israeli, Turkish, Japanese and Thai. In 2003, Jamie Griggs Tevis published her autobiography, My Life with the Hustler. Source: Wikipedia

"Let me show you something," Farnsworth said. He set his near-empty drink—a Bacardi martini—on the mantel and waddled out of the room toward the basement.

I sat in my big leather chair, feeling very peaceful with the world, watching the fire. Whatever Farnsworth would have to show to-night would be far more entertaining than watching T.V.—my custom on other evenings. Farnsworth, with his four labs in the house and his very tricky mind, never failed to provide my best night of the week.

When he returned, after a moment, he had with him a small box, about three inches square. He held this carefully in one hand and stood by the fireplace dramatically—or as dramatically as a very small, very fat man with pink cheeks can stand by a fireplace of the sort that seems to demand a big man with tweeds, pipe and, perhaps, a saber wound.

Anyway, he held the box dramatically and he said, "Last week, I was playing around in the chem lab, trying to make a new kind of rubber eraser. Did quite well with the other drafting equipment, you know, especially the dimensional curve and the photosensitive ink. Well, I approached the job by trying for a material that would absorb graphite without abrading paper."

I was a little disappointed with this; it sounded pretty tame. But I said, "How did it come out?"

He screwed his pudgy face up thoughtfully. "Synthesized the material, all right, and it seems to work, but the interesting thing is that it has a certain—ah—secondary property that would make it quite awkward to use. Interesting property, though. Unique, I am inclined to believe."

This began to sound more like it. "And what property is that?" I poured myself a shot of straight rum from the bottle sitting on the table beside me. I did not like straight rum, but I preferred it to Farnsworth's rather imaginative cocktails.

"I'll show you, John," he said. He opened the box and I could see that it was packed with some kind of batting. He fished in this and withdrew a gray ball about the size of a golfball and set the box on the mantel.

"And that's the—eraser?" I asked.

"Yes," he said. Then he squatted down, held the ball about a half-inch from the floor, dropped it.

It bounced, naturally enough. Then it bounced again. And again. Only this was not natural, for on the second bounce the ball went higher in the air than on the first, and on the third bounce higher still. After a half

minute, my eyes were bugging out and the little ball was bouncing four feet in the air and going higher each time.

I grabbed my glass. "What the hell!" I said.

Farnsworth caught the ball in a pudgy hand and held it. He was smiling a little sheepishly. "Interesting effect, isn't it?"

"Now wait a minute," I said, beginning to think about it. "What's the gimmick? What kind of motor do you have in that thing?"

His eyes were wide and a little hurt. "No gimmick, John. None at all. Just a very peculiar molecular structure."

"Structure!" I said. "Bouncing balls just don't pick up energy out of nowhere, I don't care how their molecules are put together. And you don't get energy out without putting energy in."

"Oh," he said, "that's the really interesting thing. Of course you're right; energy *does* go into the ball. Here, I'll show you."

He let the ball drop again and it began bouncing, higher and higher, until it was hitting the ceiling. Farnsworth reached out to catch it, but he fumbled and the thing glanced off his hand, hit the mantelpiece and zipped across the room. It banged into the far wall, richocheted, banked off three other walls, picking up speed all the time.

When it whizzed by me like a rifle bullet, I began to get worried, but it hit against one of the heavy draperies by the window and this damped its motion enough so that it fell to the floor.

It started bouncing again immediately, but Farnsworth scrambled across the room and grabbed it. He was perspiring a little and he began instantly to transfer the ball from one hand to another and back again as if it were hot.

"Here," he said, and handed it to me.

I almost dropped it.

"It's like a ball of ice!" I said. "Have you been keeping it in the refrigerator?"

"No. As a matter of fact, it was at room temperature a few minutes ago."

"Now wait a minute," I said. "I only teach physics in high school, but I know better than that. Moving around in warm air doesn't make anything cold except by evaporation."

"Well, there's your input and output, John," he said. "The ball lost heat and took on motion. Simple conversion."

My jaw must have dropped to my waist. "Do you mean that that little thing is converting heat to kinetic energy?"

"Apparently."

"But that's impossible!"

He was beginning to smile thoughtfully. The ball was not as cold now as it had been and I was holding it in my lap.

"A steam engine does it," he said, "and a steam turbine. Of course, they're not very efficient."

"They work mechanically, too, and only because water expands when it turns to steam."

"This seems to do it differently," he said, sipping thoughtfully at his dark-brown martini. "I don't know exactly how—maybe something piezo-electric about the way its molecules slide about. I ran some tests—measured its impact energy in foot pounds and compared that with the heat loss in BTUs. Seemed to be about 98 per cent efficient, as close as I could tell. Apparently it converts heat into bounce very well. Interesting, isn't it?"

"*Interesting?*" I almost came flying out of my chair. My mind was beginning to spin like crazy. "If you're not pulling my leg with this thing, Farnsworth, you've got something by the tail there that's just a little bit bigger than the discovery of fire."

He blushed modestly. "I'd rather thought that myself," he admitted.

"Good Lord, look at the heat that's available!" I said, getting really excited now.

Farnsworth was still smiling, very pleased with himself. "I suppose you could put this thing in a box, with convection fins, and let it bounce around inside—"

"I'm way ahead of you," I said. "But that wouldn't work. All your kinetic energy would go right back to heat, on impact—and eventually that little ball would build up enough speed to blast its way through any box you could build."

"Then how would you work it?"

"Well," I said, choking down the rest of my rum, "you'd seal the ball in a big steel cylinder, attach the cylinder to a crankshaft and flywheel, give the thing a shake to start the ball bouncing back and forth, and let it run like a gasoline engine or something. It would get all the heat it needed from the air in a normal room. Mount the apparatus in your house and it would pump your water, operate a generator and keep you cool at the same time!"

I sat down again, shakily, and began pouring myself another drink.

Farnsworth had taken the ball from me and was carefully putting it back in its padded box. He was visibly showing excitement, too; I could see that his cheeks were ruddier and his eyes even brighter than normal. "But what if you want the cooling and don't have any work to be done?"

"Simple," I said. "You just let the machine turn a flywheel or lift weights and drop them, or something like that, outside your house. You have an air intake inside. And if, in the winter, you don't want to lose heat, you just mount the thing in an outside building, attach it to your generator and use the power to do whatever you want—heat your house, say. There's plenty of heat in the outside air even in December."

"John," said Farnsworth, "you are very ingenious. It might work."

"Of course it'll work." Pictures were beginning to light up in my head. "And don't you realize that this is the answer to the solar power problem? Why, mirrors and selenium are, at best, ten per cent efficient! Think of big pumping stations on the Sahara! All that heat, all that need for power, for irrigation!" I paused a moment for effect. "Farnsworth, this can change the very shape of the Earth!"

Farnsworth seemed to be lost in thought. Finally he looked at me strangely and said, "Perhaps we had better try to build a model."

I was so excited by the thing that I couldn't sleep that night. I kept dreaming of power stations, ocean liners, even automobiles, being operated by balls bouncing back and forth in cylinders.

I even worked out a spaceship in my mind, a bullet-shaped affair with a huge rubber ball on its end, gyroscopes to keep it oriented properly, the ball serving as solution to that biggest of missile-engineering problems, excess heat. You'd build a huge concrete launching field, supported all the way down to bedrock, hop in the ship and start bouncing. Of course it would be kind of a rough ride… .

In the morning, I called my superintendent and told him to get a substitute for the rest of the week; I was going to be busy.

Then I started working in the machine shop in Farnsworth's basement, trying to turn out a working model of a device that, by means of a crankshaft, oleo dampers and a reciprocating cylinder, would pick up some of that random kinetic energy from the bouncing ball and do something useful with it, like turning a drive shaft. I was just working out a convection-and-air pump system for circulating hot air around the ball when Farnsworth came in.

He had tucked carefully under his arm a sphere of about the size of a basketball and, if he had made it to my specifications, weighing thirty-five pounds. He had a worried frown on his forehead.

"It looks good," I said. "What's the trouble?"

"There seems to be a slight hitch," he said. "I've been testing for conductivity. It seems to be quite low."

"That's what I'm working on now. It's just a mechanical problem of pumping enough warm air back to the ball. We can do it with no more than a twenty per cent efficiency loss. In an engine, that's nothing."

"Maybe you're right. But this material conducts heat even less than rubber does."

"The little ball yesterday didn't seem to have any trouble," I said.

"Naturally not. It had had plenty of time to warm up before I started it. And its mass-surface area relationship was pretty low—the larger you make a sphere, of course, the more mass inside in proportion to the outside area."

"You're right, but I think we can whip it. We may have to honeycomb the ball and have part of the work the machine does operate a big hot air pump; but we can work it out."

All that day, I worked with lathe, milling machine and hacksaw. After clamping the new big ball securely to a workbench, Farnsworth pitched in to help me. But we weren't able to finish by nightfall and Farnsworth turned his spare bedroom over to me for the night. I was too tired to go home.

And too tired to sleep soundly, too. Farnsworth lived on the edge of San Francisco, by a big truck by-pass, and almost all night I wrestled with the pillow and sheets, listening half-consciously to those heavy trucks rumbling by, and in my mind, always, that little gray ball, bouncing and bouncing and bouncing… .

At daybreak, I came abruptly fully awake with the sound of crashing echoing in my ears, a battering sound that seemed to come from the basement. I grabbed my coat and pants, rushed out of the room, almost knocked over Farnsworth, who was struggling to get his shoes on out in the hall, and we scrambled down the two flights of stairs together.

The place was a chaos, battered and bashed equipment everywhere, and on the floor, overturned against the far wall, the table that the ball had been clamped to. The ball itself was gone.

I had not been fully asleep all night, and the sight of that mess, and what it meant, jolted me immediately awake. Something, probably a

heavy truck, had started a tiny oscillation in that ball. And the ball had been heavy enough to start the table bouncing with it until, by dancing that table around the room, it had literally torn the clamp off and shaken itself free. What had happened afterward was obvious, with the ball building up velocity with every successive bounce.

But where was the ball now?

Suddenly Farnsworth cried out hoarsely, "Look!" and I followed his outstretched, pudgy finger to where, at one side of the basement, a window had been broken open—a small window, but plenty big enough for something the size of a basketball to crash through it.

There was a little weak light coming from outdoors. And then I saw the ball. It was in Farnsworth's back yard, bouncing a little sluggishly on the grass. The grass would damp it, hold it back, until we could get to it. Unless… .

I took off up the basement steps like a streak. Just beyond the back yard, I had caught a glimpse of something that frightened me. A few yards from where I had seen the ball was the edge of the big six-lane highway, a broad ribbon of smooth, hard concrete.

I got through the house to the back porch, rushed out and was in the back yard just in time to see the ball take its first bounce onto the concrete. I watched it, fascinated, when it hit—after the soft, energy absorbing turf, the concrete was like a springboard. Immediately the ball flew high in the air. I was running across the yard toward it, praying under my breath, *Fall on that grass next time*.

It hit before I got to it, and right on the concrete again, and this time I saw it go straight up at least fifty feet.

My mind was suddenly full of thoughts of dragging mattresses from the house, or making a net or something to stop that hurtling thirty-five pounds; but I stood where I was, unable to move, and saw it come down again on the highway. It went up a hundred feet. And down again on the concrete, about fifteen feet further down the road. In the direction of the city.

That time it was two hundred feet, and when it hit again, it made a thud that you could have heard for a quarter of a mile. I could practically see it flatten out on the road before it took off upward again, at twice the speed it had hit at.

Suddenly generating an idea, I whirled and ran back to Farnsworth's house. He was standing in the yard now, shivering from the morning air, looking at me like a little lost and badly scared child.

"Where are your car keys?" I almost shouted at him.

"In my pocket."

"Come on!"

I took him by the arm and half dragged him to the carport. I got the keys from him, started the car, and by mangling about seven traffic laws and three prize rosebushes, managed to get on the highway, facing in the direction that the ball was heading.

"Look," I said, trying to drive down the road and search for the ball at the same time. "It's risky, but if I can get the car under it and we can hop out in time, it should crash through the roof. That ought to slow it down enough for us to nab it."

"But—what about my car?" Farnsworth bleated.

"What about that first building—or first person—it hits in San Francisco?"

"Oh," he said. "Hadn't thought of that."

I slowed the car and stuck my head out the window. It was lighter now, but no sign of the ball. "If it happens to get to town—any town, for that matter—it'll be falling from about ten or twenty miles. Or forty."

"Maybe it'll go high enough first so that it'll burn. Like a meteor."

"No chance," I said. "Built-in cooling system, remember?"

Farnsworth formed his mouth into an "Oh" and exactly at that moment there was a resounding *thump* and I saw the ball hit in a field, maybe twenty yards from the edge of the road, and take off again. This time it didn't seem to double its velocity, and I figured the ground was soft enough to hold it back—but it wasn't slowing down either, not with a bounce factor of better than two to one.

Without watching for it to go up, I drove as quickly as I could off the road and over—carrying part of a wire fence with me—to where it had hit. There was no mistaking it; there was a depression about three feet deep, like a small crater.

I jumped out of the car and stared up. It took me a few seconds to spot it, over my head. One side caught by the pale and slanting morning sunlight, it was only a bright diminishing speck.

The car motor was running and I waited until the ball disappeared for a moment and then reappeared. I watched for another couple of seconds until I felt I could make a decent guess on its direction, hollered at Farnsworth to get out of the car—it had just occurred to me that there was no use risking his life, too—dove in and drove a hundred yards or so to the spot I had anticipated.

I stuck my head out the window and up. The ball was the size of an egg now. I adjusted the car's position, jumped out and ran for my life.

It hit instantly after—about sixty feet from the car. And at the same time, it occurred to me that what I was trying to do was completely impossible. Better to hope that the ball hit a pond, or bounced out to sea, or landed in a sand dune. All we could do would be to follow, and if it ever was damped down enough, grab it.

It had hit soft ground and didn't double its height that time, but it had still gone higher. It was out of sight for almost a lifelong minute.

And then—incredibly rotten luck—it came down, with an ear-shattering thwack, on the concrete highway again. I had seen it hit, and instantly afterward I saw a crack as wide as a finger open along the entire width of the road. And the ball had flown back up like a rocket.

My God, I was thinking, *now it means business. And on the next bounce… .*

It seemed like an incredibly long time that we craned our necks, Farnsworth and I, watching for it to reappear in the sky. And when it finally did, we could hardly follow it. It whistled like a bomb and we saw the gray streak come plummeting to Earth almost a quarter of a mile away from where we were standing.

But we didn't see it go back up again.

For a moment, we stared at each other silently. Then Farnsworth almost whispered, "Perhaps it's landed in a pond."

"Or in the world's biggest cow-pile," I said. "Come on!"

We could have met our deaths by rock salt and buckshot that night, if the farmer who owned that field had been home. We tore up everything we came to getting across it—including cabbages and rhubarb. But we had to search for ten minutes, and even then we didn't find the ball.

What we found was a hole in the ground that could have been a small-scale meteor crater. It was a good twenty feet deep. But at the bottom, no ball.

I stared wildly at it for a full minute before I focused my eyes enough to see, at the bottom, a thousand little gray fragments.

And immediately it came to both of us at the same time. A poor conductor, the ball had used up all its available heat on that final impact. Like a golfball that has been dipped in liquid air and dropped, it had smashed into thin splinters.

The hole had sloping sides and I scrambled down in it and picked up one of the pieces, using my handkerchief, folded—there was no telling just how cold it would be.

It was the stuff, all right. And colder than an icicle.

I climbed out. "Let's go home," I said.

Farnsworth looked at me thoughtfully. Then he sort of cocked his head to one side and asked, "What do you suppose will happen when those pieces thaw?"

I stared at him. I began to think of a thousand tiny slivers whizzing around erratically, richocheting off buildings, in downtown San Francisco and in twenty counties, and no matter what they hit, moving and accelerating as long as there was any heat in the air to give them energy.

And then I saw a tool shed, on the other side of the pasture from us.

But Farnsworth was ahead of me, waddling along, puffing. He got the shovels out and handed one to me.

We didn't say a word, neither of us, for hours. It takes a long time to fill a hole twenty feet deep—especially when you're shoveling very, very carefully and packing down the dirt very, very hard.

—WALTER S. TEVIS

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William Olaf Stapledon

Last and First Men

Last and First Men: A Story of the Near and Far Future is a science fiction novel written in 1930 by the British author Olaf Stapledon. A work of unprecedented scale in the genre, it describes the history of humanity from the present onwards across two billion years and eighteen distinct human species, of which our own is the first and most primitive. Stapledon's conception of history is based on the Hegelian Dialectic, following a repetitive cycle with many varied civilizations rising from and descending back into savagery over millions of years, but it is also one of progress, as the later civilizations rise to far greater heights than the first. The book anticipates genetic engineering, and the idea of superminds composed of many telepathically-linked individuals.

A controversial part of the book depicts humans, in the far-off future, escaping the dying Earth and settling on Venus—in the process totally exterminating its native inhabitants, a marine intelligent species. Stapledon's book has been interpreted by some as condoning such interplanetary genocide as a justified act if necessary for racial survival, though a number of Stapledon's partisans denied that such was his intention, arguing instead that Stapledon was merely showing that although mankind had advanced in a number of ways in the future, at bottom it still possessed the same capacity for savagery as it has always had.

William Olaf Stapledon

Last Men in London

Last Men in London (1932) is a science fiction novel by Olaf Stapledon.

The narrator is the same member of the eighteenth and final human species who purportedly induced Stapledon to write Last and First Men. Last Men in London is the story of this being's exploration of the consciousness of a present-day Englishman named Paul, from childhood through service with an ambulance crew in the First World War (mirroring Stapledon's own personal history) to adult life as a schoolteacher faced with a "submerged superman" in his class nicknamed Humpty. The inadequacies of Paul's character, the various dilemmas he has to face during his life, and the occasional influence of the advanced being who shares his experiences, provide Stapledon with a semi-autobiographical platform on which to expound his philosophical and moral beliefs.

William Olaf Stapledon

Odd John: A Story Between Jest and Earnest

William Olaf Stapledon

Star Maker

Widely regarded as one of the true classics of science fiction, Star Maker is a poetic and deeply philosophical work. The story details the mental journey of an unnamed narrator who is transported not only to other worlds but also other galaxies and parallel universes, until he eventually becomes part of the "cosmic mind." First published in 1937, Olaf Stapledon's descriptions of alien life are a political commentary on human life in the turbulent inter-war years. The book challenges preconceived notions of intelligence and awareness, and ultimately argues for a broadened perspective that would free us from culturally ingrained thought and our inevitable anthropomorphism. This is the first scholarly edition of a book that influenced such writers as C.S. Lewis and Arthur C. Clarke and which Jorge Luis Borges called "a prodigious novel."

William Olaf Stapledon

Sirius: A Fantasy of Love and Discord

Sirius is Thomas Trelone's great experiment - a huge, handsome dog with the brain and intelligence of a human being. Raised and educated in Trelone's own family alongside Plaxy, his youngest daughter, Sirius is a truly remarkable and gifted creature. His

relationship with the Trelones, particularly with Plaxy, is deep and close, and his inquiring mind ranges across the spectrum of human knowledge and experience. But Sirius isn't human and the conflicts and inner turmoil that torture him cannot be resolved.
William Olaf Stapledon

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