SFWA GRAND MASTER JAMES GUNN’S STORIES and novels carry an ironic but constructive hope for the human species, as much as that is possible for a human “insider.” His sense of historical constraints and possibilities is always at play, warring with the darkness of our kind. Personally, Jim seems imperturbable, commanding both the history of SF and a grasp of sharp prose that has won widespread acclaim.

As with the rational, Appollonian temperament that we find in Clarke’s work, the urbane James Gunn seems to have never lost his cool. As with Arthur, “don’t panic” seems to be his motto.

He belongs properly to our sampling of sentinels, in this story that looks back to the history of science fiction’s puzzlement with itself.
Where they beheld only a drop of rain slowly rolling down the window-glass, I saw a universe of beings animated with all the passions common to physical lift; and convulsing their minute sphere with struggles as fierce and protracted as those of men.

BROADWAY WARMED WITH LIFE like water in a stagnant pond. Scarlet and yellow omnibuses raced through the open parts of the street and locked wheels where it was narrower. At irregular intervals they stopped to discharge passengers. When the passengers stretched their hands through a hole in the roof to pay the conductor his ransom for release, he pulled a cord that opened the door and deposited them in a sea of slippery mud, to run a gauntlet of cart wheels and horses’ hooves, before they could reach the relative safety of the pavement next to the buildings. Loaded stages stopped in front of hotels such as the Astor House or the St. Nicholas. Railway cars holding as many as thirty persons and drawn by two or even four horses came down the side streets. All these among the carriages, the commercial wagons, and the foot traffic contributed to the clutter and the crush. Next to the buildings or leaning over into the gutters were boxes, buckets, lidless flour barrels, baskets, decayed tea chests, rusty iron pans, and earthenware jars full of ashes and vegetable refuse. All contributed their share of foul odors to that of the horse dung steaming in the ankle-deep mire of the street.

The man in the black cloak stood at the corner of Eighth street and Broadway looking at the turmoil around him with the observant gaze of a scientist, absorbing the scene as a panorama before isolating the individual parts and analyzing them. What passed him was a polyglot mix of
workmen and gentry, settled citizens and confused immigrants with their bundles of clothing hung over their backs. Some spoke American English, but many conversed in German and others in English transformed in Ireland into music.

In all that confusion of traffic and appearance and dress, no one paid any attention to the man in the black cloak. He picked his way down Broadway, staying close to the buildings to avoid being splashed by the on-rushing vehicles and horses, and worked his way around heaps of refuse, until he reached Jones street. His eyes focused on a sign attached to a building on the west side. The sign read “Pfaff’s” and stairs led down to a cellar entrance.

As the man in the black cloak opened the door his ears were assailed by the confused clamor of laughter and multilingual conversation, clattering dishes and clinking glasses, and voices shouting, and he breathed in the heady odor of lager beer and rich German food. The room was filled with wooden tables and chairs that extended to a modest bar against the wall, flanked by a swinging door leading to a kitchen. As the man in the black cloak stepped into the room, he could see that the room extended into an alcove under the sidewalk. There, at a huge table set with dishes and glasses, some twenty young men and a couple of women were talking with great animation. All but one were fashionably dressed.

The man in the black cloak seated himself at an unoccupied table nearby and ordered a glass of wine before he turned to watching the table of revelers in the alcove. Occasionally he could overhear a scrap of conversation or song, but mostly the competition for attention created only a hubbub of noise. From time to time someone left, lingeringly, as if tearing himself from loved ones, and sometimes on or more persons arrived to a chorus of welcomes and clasps of fellowship.
Finally a man arose unsteadily from near the head of the table, and with many long farewell, made his way toward the door. He had a young face, although at the moment it was flushed and the eyes were a bit glazed. He had a broad forehead from which his long brown hair had already started to recede, a substantial nose that had been broken at least once, and a receding chin that he partially concealed by a bushy, swooping mustache. As he passed, the man in the black cloak arose from his chair and said, “Mr. O’Brien?”

“You have my name, sir,” the other said, a touch of Ireland in his voice. “But you have the advantage of me.”

“You are Fitz James O’Brien, the noted poet, playwright, and author?” the man in the cloak continued.

“The same,” O’Brien replied with a hint of impatience.

“Let me apologize for accosting you thus,” the man in the cloak said, “but my name is T. J. Whelpley. I am a physician, and a writer, though not by any means of your stature and renown, and I have been waiting to speak to you on a matter of some urgency.”

“And what would that be, Dr. Whelpley?”

“Will you come to my rooms, Mr. O’Brien, so that I can show you something interesting and we can talk at leisure?”

“Do you have any beer?” O’Brien asked.

“I have some reasonably good claret.”

“Claret will do,” O’Brien said. “I was going to my room to work on a new poem, but, to tell the truth, it was only duty that called me and not Calliope or Erato. Lead on, my dear Dr. Whelpley.”
In the common spots of mould, which my mother, good housekeeper that she was, fiercely scooped away from her, jam pots, there abode for me, under the name of mildew, enchanted gardens, filled with dells and avenues of the densest foliage and most astonishing verdure, while from the fantastic boughs of these microscopic forests hung strange fruits glittering with green, and silver, and gold.

They emerged into the night of Broadway, lit now by gas jets and scarcely less busy than by day. Indeed, it was crowded even more by the parade of a uniformed company of the New York Seventh regiment.

“The latest census counts more than six hundred thousand residents of this small island,” O’Brien said. “and it has almost doubled in the past decade. Where will we put the people and the horses and the vehicles when there are a million?”

“They will come sooner than you think,” Whelpley said. “But there is much room for growth north of Forty-second street. Steam soon will replace horses, and who knows, the new Central Park may one day be aptly named.”

A clanging sound down the street was followed by the appearance of a fire engine dragged along by a, crew of more than twenty men followed by a mob of shouting and cheering boys. The volunteers wore large boots, dark pantaloons held up by leather belts, thick red shirts, and firemen’s helmets.

“Many famous people of the literary and theater world were gathered at your table,” Whelpley said.

“Was that Mr. Whitman, the poet, sitting on the other side of the table? The one with the open-necked shirt and the flowing hair?”

“You mean the editor of the *Brooklyn Daily Eagle*?”

“His *Leaves of Grass* came out two years ago.”

“And a queer, unrhymed thing it was, too. Hardly any meter either. Yet it has a strange power,” O’Brien mused. “Perhaps I will try this free verse myself one day.”

“Have you ever considered,” Whelpley asked, “the power you wield over the soul of this developing city and nation?”

O’Brien laughed again, boisterously. “We Bohemians? You give us too much credit. We are poor scrabbling fools trying to scratch out a living by our wits and our influence is as ephemeral as the paper which our words are printed.”

The two men were silent as they made their way along the paved pedestrian walk, a few inches above Broadway’s mire. Whelpley moved purposely, O’Brien, a bit unsteadily. Ragged women, some not twelve years old, tugged at their clothing and tried to look desirable.


“We’re almost there,” Whelpley said. They had been passing business buildings with ornate stone or cast-iron fronts, but now a row of decaying mansions was on their left, massive staircases leading to small porches. “Here,” Whelpley said.

O’Brien looked up at the building. “Like me, you live in a boarding house. Where will we put those million people, do you think?”

“Housing will be built, some kinds of apartments, I would guess.”
Whelpley led the way, unlocking the front door, and entering a once stately hall, now stained and marred by time. To the left was what had once been a sitting room, with a cheerful fireplace and a scattering of chairs and tables. To the right was a dining room with a big table surrounded by chairs. This part of the house, at least, had been kept up, although the hall smelled of boiled potatoes and onions and fried meat. Ahead was a broad staircase leading to an upper floor. Up that staircase Whelpley led O’Brien and then, ignoring the smaller staircase leading to the upper floors, he turned right and unlocked a door.

Inside was not simply the single room of most boarding houses but several rooms. Whelpley lit a gas jet to reveal the first of them, a physician’s office with desk and chairs and bookcases, examining table and glass cases filled with instruments and bottles filled with pharmaceuticals and charts of the human anatomy upon the walls. Beyond, to the right, O’Brien glimpsed what seemed a bedroom; to his left, as Whelpley lit the gas there as well, O’Brien could see a third room fitted out as a kind of laboratory. Racks of chemicals filled the walls and experimental tables, equipped with retorts and tubes and bottles of fluid, were arranged neatly about the bare floor.

“You are a, scientist as well as a physician,” O’Brien observed. Now about that claret....”

Whelpley motioned O’Brien into the laboratory. Indicating a stool in front of a bench on which stood some kind of instrument draped with an off-white canvas cover, Whelpley left the room and a few moments later returned, absent his cloak, with a decanter half full of reddish liquid and a couple of tumblers. “Forgive the absence of amenities,” he said. “I don’t entertain in my rooms.” He poured both tumblers half full.
“Nor do any of us unlanded gentry.” O’Brien picked up the glass and sipped it as if judging its age and character. “That is good stuff,” he said, “as good as ever I had in London or Paris.” He drained it in a couple of swallows and held out his glass for a refill.

“First let me show you what I brought you here to see,” Whelpley said. He lifted the cover from the instrument on the table in front of O’Brien. It was a microscope, almost a work of art with a slender brass barrel extending above brass feet, an exquisitely machined knob on the side, and a silvered mirror below. Whelpley lit a small gas jet on the table, took up an eyedropper full of water from a nearby jar, squeezed a drop onto a glass slide, and slipped it into arms just above the mirror. Looking through the eyepiece, he adjusted the mirror and the knob to bring the slide into focus. “Now,” he said, lifting his head and gesturing for O’Brien to take his place.

O’Brien hesitated and then, shrugging, peered into the eyepiece. He raised his head. “I don’t see a thing.”

“Take a moment for your eye to adjust,” Whelpley said. “Just relax. Don’t try to make something happen.”

O’Brien sighed and looked again through the eyepiece. After moment he twitched and said, “Fascinating!”

“What do you see?”

“Lots of little creatures moving around as if in another world. What is it?”

“That’s a drop of water I got from a nearby well. And those little creatures, or animalcules, are part of the process of life. We drink them. They live within us or they die. They may even make us ill. They sham our world, but they—and we—know nothing of the other. Until now.
Like all active microscopists I gave my imagination full play. Indeed, it is a common complaint against many such, that they sup the defects of their instruments with the creations of their brains. I imagined depths in Nature which the limited power of my lenses prohibited me from exploring. I lay awake at night constructing imaginary microscopes of immeasurable power, with which I seemed to pierce through all the envelopes of matter down to its original atom.

O’Brien looked at the microscope with greater respect. It was not only an artificer’s work of art, it had the unsuspected power of revealing the unknown, perhaps the unknowable. “I’ve heard of the microscope, of course, but I had no idea— What kind of microscope is it?”

“It’s called a Spencer Trunion,” Whelpley said. “But that’s not important.”

“To a writer everything is important.” O’Brien was excited now. He had forgotten about the claret. Once more he peered into the eyepiece and studied the slide. “Incredible!” he muttered.

“What is incredible is what it means.”

“Of course. What a fine story it would make.”

“Perhaps you can use it for one of your ‘Man About Town’ columns for Harper’s.”

“It’s too good an idea to waste on a column. No, it should be a story in its own right. Someone looks through a microscope, maybe a really big one, and sees—what? Something wonderful!”

Whelpley half-filled O’Brien’s glass but O’Brien ignored it. “Perhaps we should talk in the other room where there are chairs.”

The physician picked up both glasses and moved into the examination room. He put the glasses on the desk, took his seat behind it, and motioned O’Brien into the chair in front.
“You want me to write about the unsuspected creatures that lurk around us, that we breathe in and we drink, that may make us ill,” O’Brien said.

Whelpley shook his head. “They may indeed injure us. A German physiologist has already speculated about the microscopic basis of life itself, and biology is destined to become the queen of the sciences. But what I am concerned about is even more basic than that, and that is the growing conflict between reason and emotion.”

“What if a microscopist should actually see another world?” O’Brien said. “It would have to be a different kind of microscope; of course, or someone would have seen it before.”

“People will make better microscopes,” Whelpley said, “just as they improve on everything. McCormick’s reaper has been around a quarter of a century, the telegraph for two decades, nitroglycerin for a dozen years. Invention is changing our lives. Why, I hear that someone had invented an elevator, which means that the height of buildings in Manhattan no longer will be limited by the distance people can climb stairs.”


“Actually a diamond was used for a lens sometime in the 1820s with no improvement in resolution,” Whelpley said. “What I want to talk to you about, however, is the way science is changing our lives. A couple of European political philosophers commented on the process a decade ago.” He removed a book from the shelves behind his desk, flipped it open, and began to read from it “The bourgeoisie during the rule of scarce 100 years has created more massive and more colossal productive forces than have all preceding generations together. Subjection of nature’s forces to man, machinery, application of chemistry to industry and agriculture, steam navigation, railways, electric telegraphs, clearing of whole continents for cultivation,
canalization of Avers, whole populations conjured out of the ground—what earlier century had even a presentiment that such productive forces slumbered in the lap of social labor.””

“Maybe one could use this new all-purpose stuff, this electricity, in combination with a lens made out of diamond,” O’Brien went on.

“Look at what the railroad has done to this country, already linking distant places,” Whelpley said. “Why, there’s a state in the southwest as big as five New Yorks, and one clear on the other coast less than a decade old, with fields of gold sufficient to satisfy everyone’s greed. And in another decade we may be able to travel both of those states by railroad. Distance will be annihilated. And one day we’ll fill up all that empty space with people.”

“But how would some innocent experimenter find out about such a process?” O’Brien mused.

“Look at what has happened in electricity,” Whelpley said. “Every decade, beginning in 1800, has come a new development: the storage battery, the electric motor, the electric generator. . . . What will come next? Electric lights? The harnessing of sound, voice communication over long distances?”

“Perhaps a medium might put him in touch with some long-dead microscopist: O’Brien said.

“And basic science. Like the nature of matter or chemical combination, or the origin of life. There’s a French scientist trying to figure out why wine turns sour. Who knows what may come of that?”

“I could write a story about someone building a fantastic microscope using a lens made of diamond,” O’Brien said.
“What the world needs,” Whelpley said, “is a better understanding of science and how it is changing the world for the better. Or the worse. Of course invention has been applied to warfare as well—rifle bullets for instance, and the firearm magazine, and the revolver. Ways to kill more people faster.”

“But where would he get a diamond big enough to use as a lens?” O’Brien said.

She swept out from between the rainbow-curtains of the cloud-trees into the broad sea of light that lay beyond Her motions were those of some graceful Naiad cleaving by a mere effort of her will the clear, unruffled waters that fill the chambers of the sea. She floated forth with the serene grace of a frail bubble ascending through the still atmosphere of a June day. The perfect roundness of her limbs formed suave and enchanting curves. It was like listening to the most spiritual symphony of Beethoven the divine, to watch the harmonious flow of lines.

“Look at that,” Whelpley said, gesturing at a drawing hanging on the far wall. O’Brien turned to look at it. The drawing displayed the human body, with the skin removed to reveal the muscles and the internal organs. “The part that distinguishes us from the animals, the brain, is so small compared to our oversized genitals. Our lusts, our emotions, are more important to us than our rational processes.”

“My microscopist would have to fall in love with something,” O’Brien said. “Maybe a beautiful female creature living in a world far beyond his reach, beyond even the ability to hear or understand his hopeless passion.”

“People fear thought when they ought to fear uncontrolled emotion,” Whelpley said. “You and your friends, these men of genius, could help explain and dramatize the issues, the
prospects for the' future, could give readers a sense of what the future will bring and how their own humanity may be enhanced by it.”

“Of course it would be futile,” O’Brien said.

“Because if we don’t do something, the passions accumulating in the world will find expression that may shatter every hope. Revolution is epidemic in Europe, and in this country events move us toward civil war.”

“War? Here?” O’Brien said. At last Whelpley had claimed his attention. Whelpley reached into the shelf behind him and removed a book that he pushed across the desk toward O’Brien. “Have you read this?”

O’Brien picked up the book and looked at its tide. “Dear Sentimental Mistress Stowe,” he said ironically. “One doesn’t read a book like this, one browses through it.”

“Thousands of people have read it, and it has inflamed their imaginations. I believe in the abolition of slavery and the freeing of the slaves, but rationally—not through bloodshed and anger.”

“Surely it will not come to that,” O’Brien said.

“Perhaps not for slavery alone, but for political reasons dividing the northern and southern states. The fighting in Kansas is only the prelude to a larger battle. Already a senatorial candidate in Illinois has told his state convention that ‘a house divided against itself cannot stand.’ If someone like that gets elected president, what do you think the southern states will do?”

“Why, they will work like hell at the next election, of course,” O’Brien said.
“If they behaved rationally,” Whelpley said. “But fear and hatred are powerful emotions, and I foresee great tragedies ahead unless thinking men and women work together to quench the flames of passion with the cool waters of reason.”

“A sort of volunteer fire-fighting company of the mind, eh, Dr. Whelpley?” O’Brien said.

“You joke: Whelpley said. “Yet I am perfectly serious. A war between the states would shatter this nation for generations and create hatreds that would last for a century. If war should start after the next presidential election, you yourself would be one of the first to volunteer, and being the romantic Irish gentleman that you are, you would seek the heat of the battle and be killed within the first year along with hundreds of thousands of young men north and south.”

“You may be right,” O’Brien said. He did not seem disturbed at the prospect. “To die in the service of one’s adopted country would not be so terrible a fate.” He reflected upon the matter for a moment. “It would, at least, settle my debts once and for all. My microscopist would have to die, of course. Or perhaps go mad.”

“If you insist on writing a story about a microscopist,” Whelpley said, “then make him a scientist, discovering the causes of disease, perhaps ministering to dying soldiers and discovering the causes and treatments of putrefaction.”

O’Brien smiled knowingly. “You may understand microscopes, but you don’t understand human nature. To make a perfect microscope is an act of hubris, and it must be punished by Nemesis.”

“It’s you, my dear O’Brien, who do not understand science. To explore more deeply is not an act of hubris but a use of those faculties that distinguish mankind from the brutes, and to discover the ways in which the Universe work’s is to free oneself from Nature’s tyranny rather
than to invoke the wrath of the Gods. And that is the vision I would hope you would help make available broadly before it is too late.”

“It wouldn’t work,” O’Brien said, lifting his glass and draining its contents. He looked longingly at the decanter and then rose to his feet, no longer unsteady. “I don’t have the power. None of us has the power. And not a person is changed by poetry or literature except those who don’t need changing. The people you want to reach don’t read *Harper’s* or *The Atlantic*. But I want to thank you for a good claret, a stimulating conversation, and a wonderful idea for a story which, if I deal with it properly, may make my reputation—or at least a hundred dollars.

“And so good night to you, Dr. Whelpley. If I may, I would like to call upon your expertise again to assist me with the details of my story which I think I shall call ‘The Diamond Lens.’”

O’Brien bowed and made his way to the door and down the broad stairs into the night while Whelpley stared, his glass forgotten in his hand, at the drawing of the flayed human body on the far wall.
Writer, editor, scholar, and educator, James Gunn has had a great influence on science fiction, and was honored for his lifetime of work with the SFWA Grand Master Award in 2007. He is Director of the Center for the Study of Science Fiction at the University of Kansas, where he is a professor of English, and conducts an annual workshop for aspiring science fiction and fantasy writers. Among his many novels are Star Bridge (with Jack Williamson), Station in Space, The Joy Makers, The Immortals, The Listeners, The Magicians, The Dreamers, and Gift from the Stars. His scholarly works include Isaac Asimov: The Foundation of Science Fiction and a six-volume anthology series, The Road to Science Fiction. Four of his stories were dramatized on NBC radio’s “X Minus One;” his story “The Cave of Night” was produced on television’s Desilu Playhouse in 1959 as “Man in Orbit; and The Immortals was dramatized as an ABC-TV “Movie of the Week” in 1969 as “The Immortal” and became an hour-long series in 1970 — 1971. A veteran of the U.S. Navy during World War II, he lives in Lawrence, Kansas. He is working on a new novel.