

Quantum Pulp Some physics is just crime fiction with math.

We've all seen it: Humphrey Bogart in black and white, chasing crooks through shadows and down dreary alleys. The moody, hard-boiled noir that Bogie personified defined an age of wartime anomie in Europe and the US, and made for gritty, stimulating film and novels. Today, the chiaroscuro tone of pulp is not only found in repertory theaters and airport bookshops: Detective narratives are turning up in efforts to solve the deepest mysteries of quantum mechanics.

Creative fiction is a powerful device for elucidating complex quantum phenomena, both for informing the public and among physicists themselves. Whodunits are natural fits for the portrayal, for example, of the duplicity of light: In the infamous double-slit experiments, photons seemingly change properties to avoid detection of their true nature by playing both sides of the wave-particle duality.

A recent article entitled "An Entangled Web of Crime: Bell's Theorem as a Short Story," in the *American Journal of Physics*, used a Sherlock Holmes plotline to explain effects of quantum non-locality. According to the co-author, Dr. Howard Wiseman of Griffith University in Australia, "A mystery or crime seemed to be the natural setting because of its adversarial structure with police questioning suspects who have something to hide. In quantum mechanics, nature seems like that; we can ask questions, but nature itself has something to hide and usually only gives up part of the truth." Hard-boiled narration is an apt complement to quantum information. Technical articles are filled with agents, ciphers, bombs, uncertainty and hidden variables. But it also goes the other way: Quantum theory appears in neo-noir works from Douglas Adams' Dirk Gently's Holistic Detective Agency to $I \checkmark$ Huckabees. In his play Hapgood, Tom Stoppard famously used quanta to describe double agents; the Coen brothers invoked Heisenberg to acquit The Man Who Wasn't There.

Though the literati have well employed quantum theory in their art, physicists have done them one better. Last year, *Nature* published a widely-read detective serial in which an investigator used quantum communication to solve a murder, and Albert Einstein and Leopold Infeld's influential popular work, *The Evolution of Physics*, employed a lengthy scientist-as-detective metaphor.

As Raymond Chandler—crime fiction's Einstein—said, "There are two kinds of truth; the truth that lights the way and the truth that warms the heart. The first of these is science, and the second is art. Without art, science would be as useless as a pair of high forceps in the hands of a plumber...Without science, art would become a crude mess of folklore and emotional quackery." Perhaps the confluence of the obtuse with the low-brow may be what is needed to solve the murder of Schrödinger's cat and tease out the secrets of that ultimate femme fatale, Mother Nature.

—Joshua Roebke

POETRY

Telling Fibs



Like so much that is great and wondrous in culture, it started on a blog and then

was written about in the *New York Times*: we're talking about the "Fib." The Fib is a poem that draws on the Fibonacci sequence; its lines consist of 1, 1, 2, 3, 5, 8 (and so on) syllables. *Seed* asked Jason Zuzga, an up-and-coming young poet who has published in *The Yale Review* and *Nerve* and was a Fine Arts Work Fellow, to whip something up. Jason was apparently inspired by a recent trip to the Hawkeye State.

Steve's Place

Drink Blue Ribbon beer and scratch down on torn paper a Tina Turner song to sing. Burlington Iowa. The Bluebird bus factory's defunct, the breakfast biscuits frozen, till your shift thaws them. Sleepy eyed, belt one last hit.

Dairy Research Facility

We can't let you put your hand in the cow's stomach through the window to her middle, but you can still watch the churning like a laundromat.

31