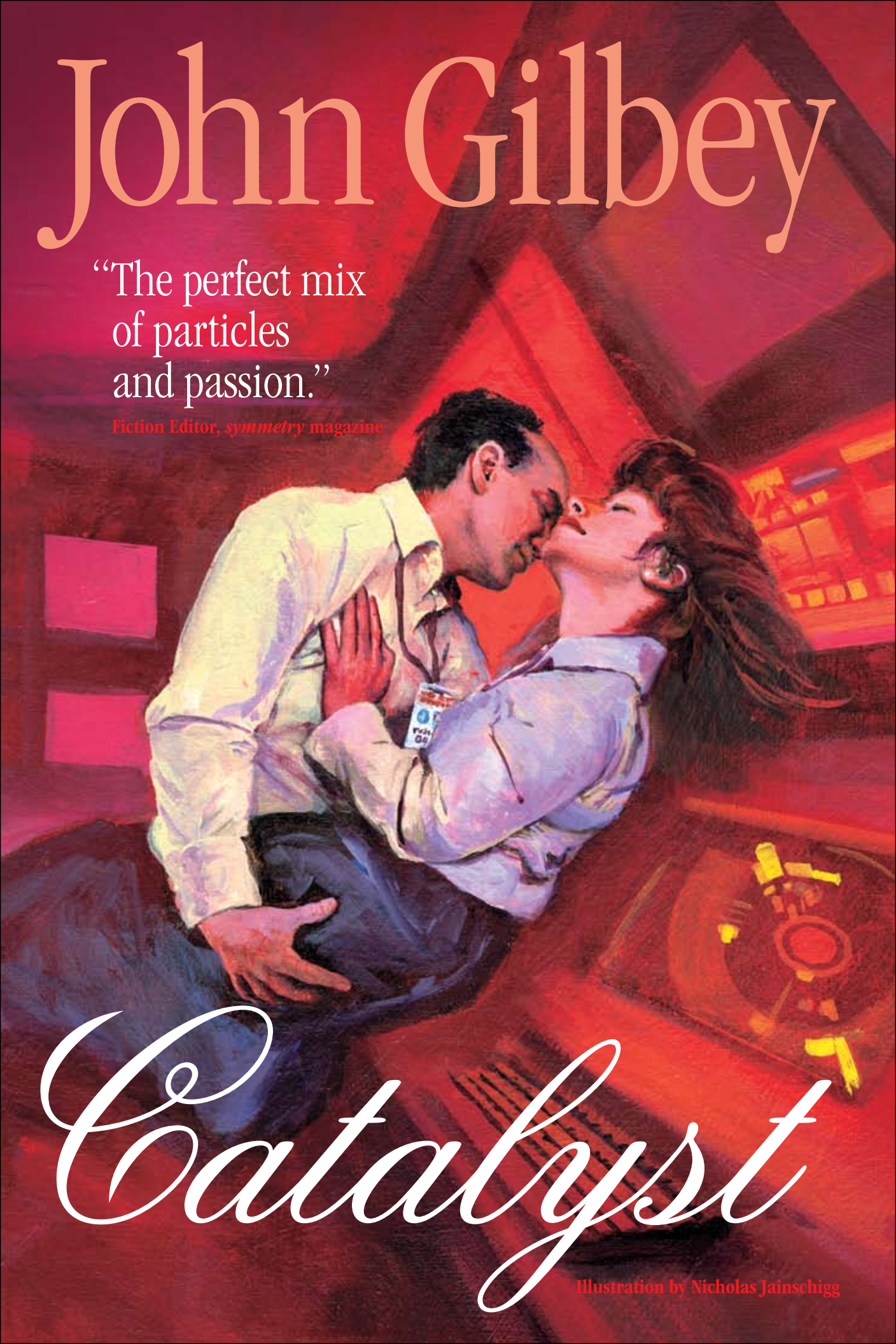
John Gilbey

"The perfect mix of particles and passion."

Fiction Editor, *symmetry* magazine



Catalyst

Illustration by Nicholas Jainschigg

You've got to understand that all this happened a long time ago, and I reckon that with the monitoring we have in place now we'd have picked up on the event much sooner. But even if it recurred today, would we have any idea what was causing it? Well, I'll leave that for others to judge.

The Bay Area was still trying to tidy itself up after the tsunami of 2018, so a lot of folk were in temporary housing and doing jobs they wouldn't normally do-which is why a senior project director was delegated to pick up the new postdoc from the Caltrain station. Oakland was still covered by mud and debris, San Francisco International remained under military jurisdiction—running relief and logistics flights—so if you wanted to fly in from Europe it was San Jose or nothing, then take the short hop by rail.

Nobody else was there when they met, but something obviously clicked straight away. Bob wasn't known as a great talker, and his sense of humor was widely thought to have been amputated in some freak accident, but even Tony at the Guard House noticed the warm glow he was exuding as he waved his pass on the way into the site. Tony reckoned he looked like someone who'd "wandered into the beam"—a comment that scandalized the entire safety group.

Bob and Fiona were about the same age, mid-thirties at a guess, and both reasonably good looking in an undemanding kind of way. Just regular research folk then, not the kind of people to set the world alight—or so we thought at first. They worked on different projects, but people started noticing that they were ending up co-located a lot of the time, especially on the long evening shifts. Even I, widely regarded as having the social radar of a lump of rock, could tell something was up when I walked into the control room and found them in rapt conversation—eyes locked together, oblivious to the world around them.

If their work had been suffering as a result it might have been a problem, but it was quite the reverse. Alarm bells should have started ringing as soon as I overheard people in the Linear Café talking about the two of them being "lucky" with the experiments they were working on, and looking back at the project records you can see a pattern was clearly emerging.

Things came to a head just after Thanksgiving. As usual, a lot of people were traveling to be with family, so things were fairly quiet. Fiona, being a postdoc, had been kind-of-volunteered to babysit one of the routine engineering jobs. I won't bore you with the details—it was just running a test pattern at low energies, ramping the signal up and down to test some new components—but suffice it to say it didn't challenge her mental abilities.

Nobody noticed the problem in the output files until the next Monday meeting. One of the data-wranglers pointed out what she called an "engineering glitch" and the engineering chief referred to pointedly as a "typical IT foul-up." As head of operations I kept my mouth shut, knowing it was my problem in either case. After banging heads for a while, we agreed that they were probably both wrong—and I started looking for the real cause.

As the potentially guilty party I settled sourly in one of the seminar rooms, which while not too comfortable at least had a decent imaging system. I dialed

up the project and maintenance data, flowing it into a time-stream for the day in question. After the run started, three complete cycles ran smoothly and well within the confidence limits overlain in red by the system. The fourth run was different.

At 22:18:06 UTC-8 the reactive efficiency suddenly jumped from a satisfactory, but not breathtaking, 27 percent up to an unheard-of 79 percent—something that the theorists had pointed out should be impossible without divine intervention. Panicking slightly, I superimposed my systems logs on the traces. Nothing: no parameter changes, barely a mouse click, had happened over the whole period; the control streams were stable and not even the climate system showed any variation from nominal.

Running out of ideas, I punched up the video feed from the control room surveillance system and spooled it along to the time of the glitch. At 22:16:12 Bob entered the room and sat down next to Fiona at the console. She took off her headset and turned to him. They talked, slowly moving closer together. Finally, even inevitably, at 22:18:06 they kissed, and the traces headed skywards.

OK, so what happened? What magic ingredient was at work? Was it the first time they had kissed? I mean, they didn't look that good at it. When I spoke to Bob later that day he was glumly reticent about the whole business—because by that time Fiona had sworn never to speak to him again. I didn't ask him for the details.

This left me in kind of a fix. After trying to forget about it for years I've finally had a stab at writing it up for *Nature Physics*. I've even got a title I'm almost happy with, "Observations on the impact of interpersonal adult infatuation on quasi-stable high energy systems," but there is no way I'm sending it in yet. You see, I know exactly what the referees will say: Replication.

If this effect is real, then I'm going to need a whole batch of new couples who are all set to fall in love. Not just that, they've got to fall in love in the stark gray confines of the SLAC Main Control Center—which is asking a lot, I think you'll agree. Then there are the other possibilities to consider: Does heredity have an impact? Is it relevant that Fiona is English and has red hair, while Bob is a Texan and bald? My list of potential variables is depressingly long, which is why—after all these years—I'm asking you for help.

Take a look around you in the office, the lab, the coffee room. If you see a couple of people who look like they are about to fall in love, could you drop me an email? I'd love to know if the Bob/Fiona Effect is real, but please—please—don't tell the Secretary what I'm doing.