

Zeroing out his wavefunction

It's a gamble. By Peter S. Drang



I wobble my loose tooth, spit blood in the sink, and wipe away my wrecked lipstick. In the bedroom, behind the locked bathroom door, Jimbo's still bellowing. I hear him slam the vodka bottle down, his revolver's clicky-click spin – then a muffled bang. I freeze. In the bathroom mirror, one version of my face half-turns towards the door, but I take a deep breath and try to pull myself back together. Can't smear now, that won't do. I close my eyes, force my faces to cohere.

Silence. I build enough nerve to peek out.

Jimbo's body lies in bed, the revolver in his lifeless hand. Blood paints the headboard. I pad closer. Damn. He's smeared – a ghostly halo of himself. Half a wavefunction.

The gun is smeared too. One hazy revolver on the bed, the other on the dresser. That means live-Jimbo doesn't have it – good. I pry the one out of dead-Jimbo's nebulous hand and lay it on the ghost-gun on the dresser. I push and prod them until they match closely enough and merge. Even with Earth hurtling

through a cloud of discordon particles, Nature still prefers that every object remain singular. Two smeared versions of the same object will merge, given a chance. As for dead-Jimbo and live-Jimbo, even Nature can't keep a dead body and a live one cohered. For the moment, they both exist as a smear of probabilistic realities.

I open the revolver's cylinder. Looks like one bullet is smeared across five of the six chambers – the five-way split making each barely a wisp. I put them all in the same chamber so they'll merge into a single bullet of denser probabilistic substance. This merged bullet's ethereal twin is of course absent from that empty sixth chamber because it's in dead-Jimbo's brain.

The idiot played Russian roulette again.

One-sixth of him lost.

And five-sixths won.

He always only pretended to play, holding the gun up to his head, dancing his finger across the hair trigger, but never pulling. Maybe punching me numbed his hand, so he

pressed a little too hard? I smile at that karma.

I turn the cylinder so the five-sixths bullet is in the revolver's firing position. This is an opportunity. That bullet exists in live-Jimbo's reality, so it can kill him and maintain logical consistency.

A spoon clinks a plate down in the kitchen. I creep towards the stairs. There's not much time.

Quantum superposition – a single object existing in two places at once – used to last for just nanoseconds and was noticeable only in careful experiments with tiny particles. A month ago, Earth started passing through a cloud of discordons – newly discovered particles that changed the quantum rules. Now, larger objects – even people – can superpose. It happens after some major randomizing event – like the random spin of a revolver – and lasts for up to a couple of minutes. After that, Nature chooses which smears to make real. The rest? Gone.

Soon, I'll either find myself in that happy

Futures

reality where Jimbo died, or I'll be stuck suffering with him again. Tortured by his brutality, imprisoned by his threats against my family, appalled by his cleverness outwitting the apathetic legal system.

Worse: some scientists think *both* realities branch off and exist independently. I'd be stuck with Jimbo for sure, somewhere.

I shudder.

I descend the stairs; a distant siren sounds. Neighbours reported the gunshot?

I steel my jangling nerves – resolved. I'm going to finish off the rest of Jimbo. Zero out his wavefunction everywhere, for all time.

But ... think it through. If I shoot live-Jimbo, what happens? Nature will choose, about a minute from now. I'll either be standing over his splattered brains with gunshot residue on my hand – just as the police arrive – or I'll be holding an unloaded gun, and he'll be dead upstairs with gunshot residue on his hand, clearly suicide. In one reality, I'm imprisoned, in the other, I'm free.

A better choice: goad him into 'playing' again.

He's in the kitchen chomping a bowl of smeared cereal. Anything a smeared person alters becomes smeared too, entangled.

"My tooth's loose," I say.

"Too bad. Hoped to knock 'em clean out."

Trembling, I set the gun on the table. "I heard you spin it. Are you man enough to try for real?" The sirens scream closer.

He picks up the gun. Now it's smeared – it's both in his hand and still lying on the table. He holds it to his head, puts his finger on the trigger, smiles.

I know he won't pull, so I shove the table into his belly, hoping to make that finger twitch like it did upstairs.

It doesn't.

He scoffs, points the gun at me.

I drop to my knees in front of him, grab the ghostly barrel with my right hand, press my forehead to it. "I can't stand this. Just kill me already!"

His face reddens with anger. "Great idea." He places his finger on the trigger but hesitates. "Then again, it'll be much more fun to punch ..."

I lean back, pulling the gun forward in a quick jerk, forcing the trigger against his finger.

He dissipates. My hand is empty. Gun's on the table, unsmeared. Cereal bowl, just gone. A logically consistent reality has coalesced.

The police knock. They'll find Jimbo upstairs, in 100%, gloriously dead reality, his hand coated with gunshot residue.

I sink to the floor, sobbing.

I'm free.

Maybe in some other reality I'm dead. My stomach churns at the thought.

But in that reality, the police are now finding Jimbo standing over me, holding the smoking gun – confused and muttering as they cuff him.

I can live with that.

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THE STORY BEHIND THE STORY

Peter S. Drang reveals the inspiration behind *Zeroing out his wavefunction*.

My adult son is an editor and writer in Hollywood, and he always comes up with good indie movie suggestions. One night we watched *Coherence*. The movie presents a scenario in which some aspects of quantum weirdness start happening at a macro level. I enjoyed it, but it seemed to sidestep the really weird quantum stuff, such as entanglement and nonlocality. What would those things look like at a macro level? And how could a downtrodden individual take advantage of those quantum effects to solve a serious problem?

I woke up the next morning with most of this story in my head, entire sequences of it worked out in a dream. The gun, the woman's face dividing into two quantum versions in the mirror, all came from that dream. An hour later I had the first draft.

The Russian roulette part of the story is my attempt at making quantum ideas involving probability more concrete, but I understand that it's not technically accurate because spinning the chamber on a revolver is definitely not a totally random quantum event. And I'm quite certain that professional physicists will easily poke many other holes in details of the 'supersized' quantum model this speculative story presents. But let's not quibble over details – that's true of most science fiction if you analyse it to death. Faster-than-light travel, anyone?

The point of the story is simply to illustrate how very odd the world of quantum particles is compared with our human-sized view of reality, and how different the world would be if we could observe those effects in our daily life. And to me, those kinds of far-flung ideas are what science fiction is all about.

