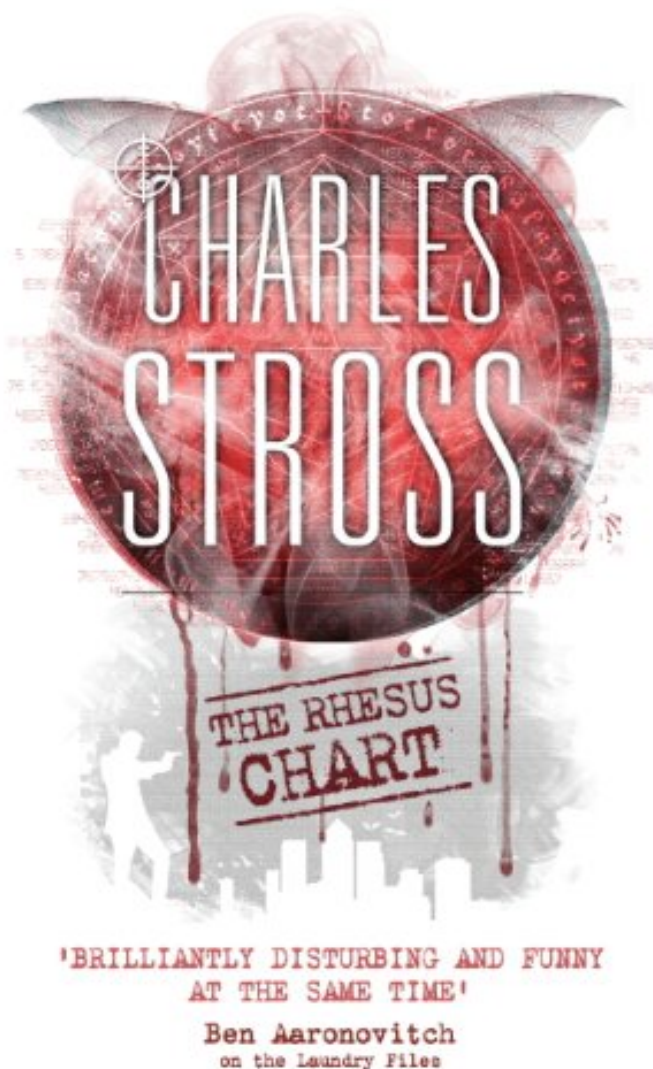


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# The Rhesus Chart: A Laundry Files novel



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## Description :

Prsentation de l'diteurLONDON CAN DRAIN THE LIFE OUT OF YOU . . .Bob Howard is an intelligence agent working his way through the ranks of the top secret government agency known as 'the Laundry'. When occult powers threaten the realm, they'll be there to clean up the mess - and deal with the witnesses. There's one kind of threat that the Laundry has never come across in its many decades, and that's vampires. Mention them to a seasoned agent and you'll be laughed out of the room. But when a small team of investment bankers at one of Canary Wharf's most distinguished financial institutions discovers an arcane algorithm that leaves them fearing daylight and craving O positive, someone doesn't want the Laundry to know. And Bob gets caught right in the middle.Extrait1.PROLOGUE: ONE MONTH AGODONT BE SILLY, BOB, SAID

MO. EVERYBODY KNOWS vampires dont exist.I froze with my chopsticks halfway to my mouth, the tiny corpse of a tempura-battered baby squid clutched precariously between them, while I flailed for a reply to her non sequitur. We were dining out at an uncomfortably pricey conveyor-belt sushi restaurant just off Leicester Square it was my treat, although I had an ulterior motive. Unfortunately I was in the doghouse for some reason. I didnt know why, and it might not even have been related to the deed Id brought her here to apologize for, but dinner showed every sign of turning into one of those rare but depressingly unfocused marital arguments we had every few months. And the most prominent warning sign was this: the replacement of reasoned discussion with peremptory denial. We cant be sure of that. I mean, doesnt that take us right into proving-a-negative territory? The ubiquity of the legends, the consistent elements, all suggest to me that maybe weve been looking in the wrong place. We were here because I thought it might help soften her up before I apologized for what Id done to her friend Pete the month before. But instead of unwinding or letting me tell her about my latest office project, shed switched into hypercritical mode as soon as we got to our booth. Apology shelved. Perhaps shed just had a bad day at the office, but begging forgiveness for sins of necessity committed in the line of duty was clearly off the menu for the time being. Ten years together, seven of them married, have taught me to recognize the signs: right now if I reminded her that the sun rose in the east shed start by stonewalling then escalate to a land war in Asia. Bob. When she said my name like that, it gave me flashbacks to Miss Pearson in Primary Two (not my favorite teacher): Vampires cant exist.

There'd be detailed records in the archives; they couldn't possibly evade detection by the state for any significant period. Besides which she aimed an alarmingly sharp wooden chopstick at my nose-there'd be corpses everywhere. Human blood is a poor nutrient source; its about 60 percent plasma by volume and only provides about 900 calories per liter, so your hypothetical blood-sucking fiend is going to have to drink about two and a half liters per day. Those calories dont come in the form of useful stuff like glucose and fat: its mostly protein from circulating red blood cells. Dracula would have to exsanguinate a victim every day just to stay alive, and would suffer from chronic ketoacidosis. The total number of intentional homicides for the whole country is around 700 a year; a single vampire would cause a 50 percent spike in the murder rate. Or they'd have to take transfusion-sized donations about two thousand times a year. She capped the boss-level takedown with a tight-lipped, triumphant smile, the better to conceal her incisors: If you think you, or I, or anyone in the office could mind-control hundreds of people well enough to prevent at least one of them going to their GP to complain about the lethargy and anemia...I gave in to the inevitable. Youve researched this already, havent you? It came up in a brainstorming exercise about six years ago. We were investigating using ecosystem analysis to evaluate the probability of emergent new threat modalities. We also brainstormed golems, werewolves, and sasquatch. She took a spoonful of miso soup. If they existed wed know about them, Bob. But I paused to swallow my squid and pluck another one from the color-coded plate in front of me. Your model assumes theyre obligate hemophages, doesnt it? And that theyre endothermic, or at least have an energy budget not entirely unlike every other vertebrate known to science. What if thats not the whole story? What if they eat? Bob. She stopped short of rolling her eyes, but I could see she was bored, and growing more annoyed by the minute: Eat your baby tentacle monsters before they go cold. Mo has an aversion to pseudopods. When we first met, some very unpleasant people were trying to sacrifice her in order to summon an alien horror from beyond spacetime. Id distracted them long enough for the seventh cavalry to arrive, and sometime after that Mo and I had started dating but she still couldn't (and cant) stomach calamari. I cleaned my plate and watched as she finished her soup. Im done here, she announced, picking up her violin case without asking whether I was still hungry. Im going home. Which is why I didnt get a chance to apologize for dragging Pete into the business in Colorado Springs. Or to explain my hypothesis about what vampirism really was, and what I was doing about it. Or to save our marriage. THE NAMES

HOWARD, BOB HOWARD. IM A COMPUTER SCIENCE graduate and IT person, and I work for the British government in London, as does my wife Mo, Dominique OBrien, who is a few years older than I am but still (in my opinion) a gorgeous redhead. Thats the mundane version, cleared for public consumption. It is also deeply misleading, but its the version Im allowed to give to friends and family without being required to kill them, so well call that a net win. Its also not entirely false. The secret organization I work for is commonly called the Laundry because when it was established in its current form in 1940 it was based above a Chinese laundry in Soho. As Q Department, SOE, it was tasked with waging an occult war against the Ahnenerbe-SS. Today, the name may have changed several times but its the same organization the one you have just been admitted to, if youre reading this classified journal and your hair isnt on fire due to the security wards on the cover. Im actually a specialist in a field called Applied Computational Demonology:

the summoning and binding to service of unspeakable horrors from other dimensions, by means of mathematical tools. Magic is a branch of applied mathematics: we live in a multiverse, there is a platonic realm of pure numbers, and when we solve certain theorems, listeners in alien universes hear the echoes. By performing certain derivations and manipulating theorems, we can make extradimensional entities sit up and listen, and sometimes get them to do what we want them to. True names have power: you should assume that any names or locations I give you may have been changed in the interest of security. Although ritual magic has been around since the dawn of time (and indeed the Laundries antecedents go back at least as far as Sir John Dee, in service to Queen Elizabeth the First under Sir Francis Walsingham), it was first systematized and placed on a concrete theoretical footing by Alan Turing in the 1940s. There are dark rumors that his suicide might have been a deeply misguided attempt to shut down a perceived security risk; if so, it was the organizations biggest mistake ever. Later on they took to recruiting anyone who rediscovered the truth by accident which led, via the mushrooming popularity of computing during the 1980s and 1990s, to an increasingly unwieldy and overstaffed org chart full of disgruntled CS postgrad researchers and mathematicians. I ended up in this line of work because once upon a time, my perfectly innocent masters thesis nearly summoned up an undead alien god in Wolverhampton. (We will step swiftly past the suggestion that this could only have resulted in urban regeneration.) Luckily the Laundry caught me in time and made me a job offer I wasnt allowed to refuse: take a nice civil service job in an obscure department where we can keep an eye on you, or be found crunchy and good with ketchup by a nightmarish monster from beyond spacetime. That was about eleven years ago. Unfortunately, after a while I got bored with my tedious make-work job and made the cardinal mistake of volunteering for active operational duty. As a result of that error of judgment, Ive had more encounters with nightmarish monsters from beyond spacetime than I care to think about, not to mention their deranged cultist worshippers. This doubtless sounds very exciting to you, but the committee meetings and form-filling that go with the job are a bit of a downer. And thats saying nothing about the hoops you have to jump through to satisfy the internal auditors that you did everything by the book. Adventures are something I try to avoid these days. Unfortunately Im not very good at it. Final wrap-up: on top of the ploddingly mathematical side of the job, Ive stumbled into a specialized sideline as a trainee necromancer, which isnt a talent youd wish on your worst enemy; and I work for an obscure boutique department called External Assets that provideswell, that would be telling. Mo also works for the Laundry. Shes not a computer geek. Shes an academic philosopher and combat epistemologist, not to mention a talented violinist. The instrument she plays was provided by the organization and has exotic, indeed horrifying, capabilities: its one of a kind. (If at this point you are thinking, occult acoustic weapons, then pat yourself on the back.) When I lay it out like that we sound like some kind of superhero team, dont we? But were actually just a couple of married civil servants with day jobs that involve far too much paperwork, and the occasional terrifying incursion from another dimension. And were probably doomed, but Ill get to that later.

AN EARLY AUTUMN EVENING IN CENTRAL LONDON CAN BE A FINE experience, or a lousy one. It depends on a variety of factors: on the weather, on whether youve just been sucked into a bad-tempered and pointless argument with your wife, on how worried you are about next months credit card bill. Not to mention your uneasy anticipation of the meeting your new and somewhat unpredictable manager has scheduled for tomorrow afternoon. That night Id rolled ones on all of my dice: it was raining and gray, Mo was pissed off with me, the credit card bill was unpleasantly large, and Lockhart isnt the worlds most forgiving boss. So I escorted Mo to the nearest tube station, then, rather than accompanying her home in prickly silence, I made a lame excuse and headed back to the office not knowing that I was about to put myself in mortal danger.

I WORK IN A BUILDING CALLED THE NEW ANNEX. ITS A LUMP OF mid-seventies concrete brutalism that squats above a closed discount store somewhere south of the Thames. The New Annex is one of the temporary offices we occupy while a public-private partnership rebuilds Dansey House, our headquarters building. Thanks to the current governments budget cuts, the months have turned into years and the Dansey House rebuild appears to have stalled. Turns out theres a nagging problem with long-forgotten and extremely powerful geases mucking up the foundations: weve run into the thaumaturgic equivalent of trying to rebuild a university campus and discovering that the walls are riddled with asbestos, the chemistry department used to pour mercury compounds and radioactive waste down the drains, and the admin block was built on top of a plague pit full of skeletons. Im resigned to working in the New Annex until I die. It wasnt furnished for comfort or convenience, even by civil service standards nobody expected to be there more than six months and these days its just seedy, with peeling paint, cracked plaster, grubby uncleaned windows, and a persistent whiff of sewage in the basement levels.

THERE IS AN ENTRYPHONE

BY THE SIDE DOOR TO A SHUTTERED discount shop in London. It looks abandoned, but works just fine: its our staff entrance. I stepped inside, pulling out my LED Lenser torch. Hello? I called. Something hissed in the darkness nearby. I raised my warrant card and pointed the torch in the direction of the sound. A withered face swung towards me: but then it recognized the warrant card and shuffled backwards, receding into the shadows again. (The lobby lights burned out six months ago and you cant get replacements for the type of bulb they use anymore: hence the torch and the shadows.) I headed directly towards the stairwell at the end of the corridor, itching to reach the relative safety and working lights of my office. The night watch are confined to the ground floor except during emergencies, and theyre only supposed to eat unauthorized intruders, and in any case I have special talents for dealing with their kind; but batteries have been known to fail, and anyway, who wants to be alone in the dark with a bunch of Residual Human Resources for company? Note: never use the Z-word to refer to them. Our Facilities Management people fastidiously describe them as Residual Human Resources, former employees who are still present in body if not in soul. When your mission involves binding and controlling mind-eating horrors, after a while it seems perfectly normal to use some of the leftover corpses to cut payroll costs on the late shift. Anyway, the Z-word is disrespectful, insulting, and considered politically incorrect around here. You might end up as one of them yourself: How would you feel about being called a zombie? AS TO JUST WHY I WENT BACK TO THE OFFICE AFTER DINNER with Mo... The Laundry marches to a different beat from the regular civil service, but we are not institutionally immune to outside influences. We do computery algorithmic stuff: this means we sometimes succumb to contagious management fads that are doing the rounds in the real world outside. In this case, the winds of change had blown in from Google (or, more likely, out of the arse of a senior management bod who had come down with a severe case of Chocolate Factory envy): management, bless their little cotton socks, decided that we needed to be Creative and Innovative and endowed with Silicon Valley start-up style va-va-voom. So they decreed that everyone above a certain grade was to spend four hours a week pursuing their own personal self-selected projects which would have been great, if they hadnt missed the point. At Google employees spend 20 percent of their hours on their own personal projects; in the Laundry we didnt get any extra time, or any extra budget. Also, we didnt get to pursue arbitrary time-wasting enquiries on our own initiative: there was a stack of vetted proposals for Creative and Innovative research ideas, and we had to pick one from the pile and sign our names to it. Our assigned jobs still came first, and in any case usually kept us busy for up to 110 percent of our working hours. In other words, the beatings were to continue until morale (and our va-va-voom) improved. To be fair, we could also contribute to the suggestions box from which a committee selected the suitable candidates for working time. If you really worked hard to engineer it, you could probably run your own project just as long as you could sneak it past the committee without one of the jobsworths shooting it down. Anyway, the Creative and Innovative self-directed work inflicted upon us from above now needed to be done and with no hours allocated to it during the working day, it had perforce to be done at night. I WASNT THE ONLY NIGHT OWL WORKING IN THE DEPARTMENT tonight; the Laundry is eccentric by civil service standards, and although the fax machines and telephone switchboards were all switched off at night to stop employees abusing the facilities (per some ancient directive issued in 1972), the coffee machine and the network remain accessible. Quite a few employees choose to work outside core business hours to minimize the risk of being disturbed. Tonight, the red NO ENTRY light above Andys office was lit, suggesting that my years-ago former manager was burning the midnight oil; our current departmental admin asset Trish: twenty-something, plump, amiably inquisitive in an utterly inappropriate way was nose down in a book at her desk in the middle of the open-plan area. Bob? Oh, hi! She deftly shuffled the book out of sight beneath a lever arch file full of forms, but not before I spotted the cover of The Hunger Games. Can I sign you in? I nodded, as she logged my badge and photographed me (duplicating a process that had certainly already happened before the front door closed behind me). What brings you back to the office? Couldnt sleep, I lied. Also, got to finish writing up a report for the Auditors. The document in question was my report on GOD GAME RAINBOW the apocalyptic clusterfuck in Colorado Springs a couple of months ago but Trish didnt need to know that: mentioning the Auditors would put her off asking any more questions. (Our audits are not strictly confined to the realm of the financial, and the people who administer them are deeply scary.) Is anyone else around? Andys up to something: he said he wasnt to be disturbed. Trishs expression of mildly affronted disapproval nailed it: she was bored. But he requested night service because of some regulation or other about not working solo, and Im top of the on-call rota, so its overtime for me... She mimed covering her mouth for a theatrical yawn. I got it, although I disapproved: regs meet reality. Andy needed to perform some

sort of procedure that the Book said needed two bodies present, but he couldn't be bothered waiting for a qualified pair of hands. Instead he ticked the checkbox by ordering up a receptionist, then did it solo. Once upon a time that kind of sloppiness had been my fortId gotten over it, but Andy had always been a little too casual to leave in a hands-on role. (That, I theorized, was why hed ended up dangling from the bottom rung of the management laddertoo high to do any damage, too low to make anyone else do any damage.) Ill go see if he needs a hand, I promised her. If youd rather go home Ill sort it out. I walked over to Andys office doordiagonally across the open plan/cubicle area from my ownand knocked twice. There was an unhuman presence on the other side of the door: it made the skin on my wrists tingle and brought an electric taste to my tongue. I listened with my ears and an inner sense Id been uneasily practicing for the past year. Tuning in on the uncanny channel brought me a faint sizzling, chittering echo of chaotic un-minds jostling for proximity to the warm, pulsing, squishy meatsacks. The lightning-blue taste of a warded summoning gridnot a large one, just an electrified pentacle unrolled on a deskwas like fingernails on a blackboard: Andy was conducting midnight invocations by the light of a backlit monitor. Okay, so he wasnt being totally stupid about this. But it still set my teeth on edge. Whos there? Its Bob. Am I safe to enter? Im running a level one. Make sure you dont violate the containment and you should be fine. Not good enough, Andy. Is it safe for me to enter? Andy sighed heavily. Yes, Mother, Im deactivating it now. Good. A muffled click came from the other side of the door, and I felt the inchoate gibbering subside. I put my hand on the doorknob and pushed. Come on in, Bob. I squeezed inside his office. Andy hovered over a home-brew lab, pale-faced and skinny, staring at me with bleary eyes. He was older than me, a member of a generation that had grown up wearing a shirt and tie to the office and who still tried to keep up appearances; he was the junior ops manager who approved my application and gave me my first ever field test. It was odd to see him in a polo shirt and chinos. Whats the project? Couldnt you wait for a health and safety check? He managed a self-deprecating shrug. You know how it is; its my weekly ten-percenter. Hed built the summoning grid on a folding table that occupied about half his floorspace: by the look of it, it had started out as a NAAFI table tennis game sometime in the 1950s, before he repurposed it as an occult research workbench. I spotted peripherals: an Arduino controller, a laptop, a couple of wire-wrap circuit boards, a breakout box, and of course a summoning grid which most people mistake for a pentacle. They roped you into the Google cargo-cult, too? I asked. Yes. He shrugged again. On the bright side, it gives me an excuse to brush up on my practical skills: Ive spent so long shuffling reports that Im in danger of forgetting what its all about. If youre willing to watch my back Id be very grateful, Bob, but you really dont need to; its perfectly safe. Yes well, I cant help thinking that youve been here since at least the BLOODY BARON meeting this morning. He nodded instinctively. Which means youve been in the office for at least twelve hours. If you were a pilot they wouldnt let you anywhere near the controls of an airliner when youre that tired: its how mistakes happen. Dont be silly, Bob! All it is is a hello, spirit world demo. Theres nothing to go wrong: all it does is execute a contained summoning of a class one voice-responsive agenta demon, to youmake it do a handstand, then send it away again. With maybe a couple of optimizations to the grid controller, which Im trying to prove with cheap off-the-shelf components. Theres no agency outside the grid. He pointed at the Arduino board. See? Its perfectly safe. WatchMy hair stood on end, I broke out in a cold sweat, and I was already in motion, halfway across the room towards him, when he began to utter the inevitable, fateful wordthisas his finger descended on the button wired to the breadboard beside the microcontroller, and power surged into the grid. I SHOVED ANDY AWAY FROM THE TABLE, BUT I WAS TOO LATE: the circuit had been completed, and I could hear the chittering in the back of my head much more clearly, over a mumbling chewing sizzle like millions of mandibles on the move. Andy, get out! I grabbed his arm and swung him towards the door. He resisted instinctively but ineffectually: I shoved him across the threshold. The alien gibbering was rising in pitch, and my skin crawled as we passed the side of the card table, where the grid was glowing with a rapidly brightening violet radiance. I felt a metallic taste on my tongue as we crossed below the lintel. Wait, what, I dont even. Finally Andy began to move under his own steam. Only a couple of seconds had passed since he began to say watch this, but my Spidey sense and the frankly terrifying sense of wrongness in my guts told me that we might be too late: whatever the thing flooding into the powered-up summoning grid was, it certainly wasnt just a harmless class one emanation. I felt it tracking me as I stepped across the threshold, like a terrier that has spotted and locked onto a juicy mouthful of rodent on the run: cold and dank and terrifyingly alien, like something from the abyssal depths of another worlds oceans. I turned and pulled the door shut, then leaned against it and reached instinctively for the ward I wear in a small leather bag on a thong around my neck. Andy, I gasped. What? What? He blinked, confused as I

stared at him. Eyes: clear. No sense of possession if I was a god-botherer I'd have given thanks right then. The door behind me rattled. I shivered: it was becoming cold to the touch. I took a deep breath. Andy, I need you to go get no. First, I want you to send Trish home. Then I want you to go get Angleton. I took a step away from the door, and turned to face it. I don't understand! It's only meant to summon a class one I could barely hear his spoken words over the gibbering din in my head emanating from the other side of the warded portal. Andy. I spoke through gritted teeth. Get Trish out of the building and to a designated place of safety. Then go and get Angleton right now. We will resume this conversation at a later date. But I glanced at him and he shut up. I'd never seen his face turn that color before: he nodded stiffly, then broke into a stumbling trot in the direction of the corridor leading to Angleton's hole. Finally. I drew another deep breath, heart pounding. The tense feeling between my shoulders was getting worse. Andy was old enough to know better. A class one manifestation, in our charmingly indirect lexicon, is nothing you want to make physical contact with. Many years ago I'd been on a training course where a guy called Fred from Accounting who'd been assigned to the course because of a typo on an HR form ended up extremely dead indeed because he hadn't understood that a voice responsive agent is a nasty little cognitive loop that can run on (and burn out) a human nervous system just as easily as a computing device. Whatever was on the other side of that door was most certainly not a class one manifestation. I could feel it from the other side of the door, like the hum of a national grid high-voltage bearer. Our offices are shielded by wards we frequently handle occult materials but whatever he'd invoked was flexing its magical muscles and coming dangerously close to overloading not only the summoning grid on that flimsy card table but the more substantial wards on the door frame. Which was very bad news. I pulled out my phone and pointed the camera at the door itself, then called up OFCUTour occult monitoring app in a smartphone-sized canto take a look. Sure enough, histograms shading from blue to violet were chewing around the edges of the elder sign in the middle of the elaborate tracery. It confirmed what I could feel in my tingling fingertips and roiling stomach: I wasn't about to open my inner eye and have an eyeball-to-eyeball look at the void by way of a third opinion, but I was pretty sure that if I did I'd see something so wrong that it wouldn't even be visible at all, except as a sucking blind-spot distortion in my visual field, dragging everything around it together at the edges like a detached retina. The doorknob appeared to be smoking. It was air condensing on the metal surface as vapor, then boiling off again. Elapsed time: thirty seconds. And here I was, with just my regulation-issue class four ward, my OFCUT-equipped phone, and whatever native magical talent I happened to have, facing the oh-shit lurking on the other side of the threshold. An equally chilly voice from behind me said, Speak, boy. What are we facing? I glanced round. It was Angleton, with Andy trailing along wearing a hang-dog expression. If it wasn't for the deafening hum and gibber I'd have felt Angleton's presence as soon as he entered the corridor leading to this office space: as chilly and powerful as the thing beyond the door. Not to mention his speech patterns: he spoke to everybody as if they were naughty schoolchildren. Judging by Andy's expression he was expecting a caning. Andy's ten-percenter involves a non-standard grid designed to summon and contain a class one. He hooked something else. I reckon it's class five or higher, minimally sentient or stronger, still inside the grid but working to get free. Leakage through the door wards is over six hundred milli-Parsons per minute right now, and rising; the grid is still powered up so I figure the entity on the other side is still trying to squeeze through the portal. Understood, Angleton said crisply. Mr. Newstrom. How exactly does your grid differ from a standard design? I looked back at the door, but I could see Andy's expression in my imagination: a naughty boy who has had to get the headmaster out of bed because he's set fire to the chemistry lab. It's not substantially different: I just used an Arduino microcontroller board and a bunch of control code I wrote for it to run a standard hello, spirit world demo. Did you use an off-the-shelf code library? Or write your own? Angleton's interrogation was gentle, precise, and pointed. I could see him in my mind's eye, too: tall, cadaverously pale, thin as a mummy, with eyes like ice diamonds. I rolled my own code generator in FORTRAN77, Andy explained. Atmel AVR machine code, not that high-level Arduino stuff. It seemed more efficient to get down to the bare metal... Angleton sighed. And now my blood ran cold. Because if there's one thing worse than an IT manager who's feeling the chill wind of obsolescence blowing down his neck and consequently trying to contribute code to the repository like an actual working developer, it's an IT manager who's getting creative. And Andy's project was nothing if not creative, for values of creativity that I don't want to go anywhere near without body armor and HAZMAT gear. Mr. Newstrom. We will have words about this later. Angleton paused: I could feel his eyes on me. Boy. Tell me what you hear? He always called me boy. From anyone else I'd take it badly; from Angleton it was probably a sign of affection. I hear termites, I said. About a trillion sixteen-dimensional, elephant-sized termites chewing on the edges of reality. Did you wire in a

remote kill switch? Angleton asked Andy. There was an eloquent moment of silence, punctuated only by the munching of metaphysical mandibles. Then the sound changed. Oh dear, I said, as Angleton simultaneously said, Mr. Newstrom, evacuate the building. Mr. Howard and I will remain to deal with this. Then, on the other side of the door, the over-stressed summoning grid ruptured. The immediate consequence of the summoning grid rupture wasn't that spectacular; the door grew colder and the runes engraved in it flared up, glowing the eerie deep blue of Cerenkov radiation. The office was warded to a high level, and would hold for at least half an hour longer than the grid on the card table. But the thing Andy had inadvertently summoned was now forcing its way into our universe directly, no longer confined by the meter-diameter circle on the table. And if it was powerful enough to overload one grid, it might well be able to overpower another, including the structural wards built into the walls, floor, and ceiling of the New Annex: in which case, we could have a real problem on our hands. Angleton closed the gap and stepped past me, extending a hand towards the door. He looked at it quizzically, even hesitantly: an expression I'd never seen on his face before, and most unwelcome. Angleton is a DSS, a Detached Special Secretary: in our unofficial lexicon the acronym really stands for Deeply Scary Sorcerer. This is, if anything, an understatement: he's known to some as the Eater of Souls. That's because he's not actually human; he's an alien intelligence bound into a human body by a powerful necromantic ritual. Luckily for us, he's on our side. I'm his assistant, apprentice, whatever you call it. I don't know the real extent of his power, but I'm a moderately competent necromancer in my own right; anything that gives Angleton cause for concern is, by definition, frightening. Boy, he said conversationally, this is going to be messy. Please verify that all the human staff are off the premises, then fetch the night watch. Fetch the what, all of them? Yes, Bob. We're going to need zombies. Lots of zombies. Wait, what I looked back at the door. Either I had a sudden eyestrain or the wards on it were bulging ominously. I glanced at my smartphone again. The thaum field was strengthening rapidly, and the flux had exceeded a thousand milli-Parsons per minute. Er, yes. Right away. I fled in the direction of the front door, leaving Angleton to face the glowing door alone, like an eldritch remix of the little Dutch boy on the dyke. There is a formal procedure for evacuating the New Annex: it involves filling out six forms in quadruplicate to obtain the key to a key cupboard containing the key to a cabinet containing a silver hammer (that bit would normally be done in advance, daily, by the Security Officer on Duty), then using the aforementioned hammer to break the glass cover on a brass box containing a bell inscribed with mystic runes. I hit the fire alarm. Then I raised my metaphysical fingers to my astral lips and emitted the most deafening mental whistle I'm capable of. Then I began to chant doggerel in Old Enochian: On Ilka Moor Baht At, or maybe, Get your shambling undead asses up here on the double. This saved a breakneck dash down a darkened staircase (not to mention all the SOD form-filling and the hammer stuff), buying me sufficient time to dash across to my own office and rummage around in the assorted crap on top of the filing cabinet for my pigeons foot, cigarette lighter, silver paint spray can, packet of sharpies, and pocket camera all the while carrying on the chant. Thus equipped I dashed back into the open-plan area just in time to see the first of the night watch shamblers towards me, arms outstretched in classic Bela Lugosi style. Be so good as to make a new grid, boy, Angleton murmured, not looking away from the haunted office door. Make it big; I need an airlock. I began to spray conductive paint in a big circle behind him, across the beige carpet tiles and continuing on up the walls and as high as I could reach. I paused before sketching in the second arc, stopped chanting, and turned to face the night watchmen. Acknowledge my authority, I ordered them in my halting Old Enochian. Slowly, with creaking joints, the wizened corpses in their blue uniforms went to their knees. Eight mummified faces turned to blindly inspect me. I could feel their attention, eager for flesh and life but bound to obey. I am your lawful knight-commander, I added. Under oath by way of my liege. They followed my gaze to Angleton, and cringed, suitably terrified. A hostile intruder lies past yonder portal. Attend. I went back to sketching in the new, larger grid around Angleton and the door. I could feel his concentration focussed on the wards around the office, intent and precise as that of any surgeon. Nearly done, I murmured, sketching glyphs rapidly: Elder Sign, Horned Skull, NAND Gate. What do you want me to do? Move two zombies in here, boy. (Angleton predates political correctness.) Then activate the grid as soon as I'm clear of it. I waved the first two night watch shamblers forward, then ducked to connect the grid terminals to a clunky-looking wireless transponder controlled by my smartphone. Ready when you are, boss. Angleton stepped back sharply. Now, boy, he said. I poked at the touchscreen and opened my inner eye. The new grid shimmered pale blue around a smaller violet doorway, fronting the roiling darkness around Andy's office. I could see the thing right through the walls and floor. Thou, Angleton said sharply, in Old Enochian, it is thine honor upon my word to open the door. And thou shalt step through the portal and be my ears and eyes

and tongue for that which lies within I twitched slightly. Was Angleton really going to use a zombie as a webcam? I've gotten used to dealing with the metabolically challenged over the past year, but even so, that was a level of intimacy I wouldn't willingly approach. Sssss, said one of the night watchmen, reaching for the doorknob. I could feel the taste of its mind, half-afraid and half-eager to discover whatever waited behind the door, ready to eat. It touched the doorknob. And pushed. The door swung open to reveal a luminous chaos. Green-edged shadows flickered across the room, dazzling me, as the other zombie lurched forward, straight into the embrace of a tangled skein of many-jointed limbs and a hairball of writhing tentacles, some of them sprouting fern-like leaves that quested blindly around the edges of the door. One of them sprouted, extending swiftly into the room; it reached the edge of the inner grid and sizzled, recoiling violently. The mass of wildly waving intrusive appendages spasmed and twitched, pulling back with the zombie dangling in its grasp, unmoving. Close the door! called Angleton, and the other zombie pulled, hard. The door scraped shut, the warding on it sucking it back into place in its frame. Well, that didn't go so well, he remarked conversationally, pulling a starched white cotton handkerchief from his breast pocket. He wiped his forehead: the cloth came away pink, smeared with perspiration and blood. Angleton glanced at the kerchief disapprovingly, then folded it neatly and tucked it away. Then he looked at me. The natives are restless tonight. A mirthless smile. A capital learning opportunity don't you think, boy? Quick. Tell me what you saw. I swallowed. You have got to be shitting me. This was Angleton all over. What you or I would recognize as an alien invasion by tentacled horrors from beyond spacetime Angleton would see as a teachable moment. I could swear there was liquid helium running in his veins. Morphologically diverse subsentient entity, didn't even notice it was in physical contact with a vessel for the feeders in the night; the usual death patterning didn't touch it. (One of the reasons the night watch are so dreadful to most people is that skin-to-skin contact with one of them is usually about as survivable as skin-to-metal contact with an electric chair. Angleton is made of sterner stuff, and I'm immune to them for a different reason. But even so.) What next? The mirthless smile broadened. You send in another body and watch what happens, while I see what I can find out about the world on the other side of that door. I turned to the group of Residual Human Resources in the corner. They looked singularly unenthusiastic for the fate Angleton had in mind for them, even by zombie standards. You can't just go using the night watch as meat probes! A residual budget-focussed reflex prompted me to protest. There'll be hell to pay in the morning! Security will have a cow! Security will have a much bigger problem to deal with if we can't close down this portal by then, boy. Angleton glanced at Andy's office. The remaining zombie in the outer ward was still clutching the door handle. After a moment I realized it was frozen to it. Do you have any suggestions? We don't have any spare nukes on the premises, do we? Don't be silly, Bob, I told myself. Well, hmm. It depends if what is on the other side of the door is still Andy's office, with a portal inside it, or if the grids ripped wide open and the door is actually opening into another domain. The latter, I believe. Angleton cocked his head on one side. You are considering the question of damage containment? Yeah. I scratched my head, then pulled my hand back when I felt my hair dripping with sweat. Send a bomb through, kill or injure whatever is pushing through from the other side, use the opportunity to exorcise everything on the other side of the door. I have a better solution than exorcism, Angleton stated. Your camera, boy. Have you loaded the basilisk firmware? Um, let me check. My pocket snapper is a hacked 3D digital camera, with firmware that turns it into a not-terribly-accurate basilisk gun. Yes, but I wouldn't recommend using it at this range... Basilisk guns are a nasty little spin-off of research into medusae, and our happy fun way of dealing with other universes. It's an observer-mediated quantum effect that applies a rather odd probability field to whatever it focusses on. About one carbon-12 or carbon-13 nucleus in a hundred, in the target, is spontaneously swapped for a silicon-28 or silicon-29 nucleus. (Yes, this violates the law of conservation of mass/energy: we reckon it works via a tunneling process from another universe.) The effect is rather dramatic. Lots of bonds break, lots of energy comes spewing out. Protein molecules go twang, nucleotide chains snap, everything gets rather hot. To a naive bystander, the target turns to stone or rather, to red-hot, carbon-riddled cinderblock. On the one hand, it's a lethally powerful hand weapon. On the other hand, you really don't want to use one at close range, say, at something on the other side of a door. The smallest area of effect it has is a bit like a sawn-off shotgun; at worst, it's an air strike in a pocket-sized package. Right now I was standing close enough that if I pointed it at Andy's door the blast effect would probably kill me. I have an idea. Wait here, boy, I need to fetch something from my office. If the ward on the door fails, snap away by all means: you'll be dead either way. And with that reassuring message, Angleton turned and scampered helter-skelter back towards his den. ANGLETON WAS ONLY GONE FOR A MINUTE, BUT IT FELT LIKE AN eternity as I stood

watching the vapor-smoking door in the pentacle. The zombie with the handle was slowly slumping towards the floor, leaning against the side of the door frame; I could hear him in the back of my head, growing sluggish and faint as if the feeder that animated his body was slowly being drained. I hefted my camera, checked the battery status, and pointed it at the portal, knowing that if the wards didnt hold it was probably futile; anything that could break in from another universe under its own motive power was out of my league. Possibly out of Angletons, too. The night watch shuffled anxiously in the corner between the reception desk and the dying potted rubber plant; I could feel their unease gnawing at the back of my head. As a rule, Residual Human Resources dont do unease: theyre placid as long as theyve got some flesh to embody them and the occasional hunk of brains to munch on. (Any old slaughterhouse brains will do: they eat them for the fatty acids. At a pinch, you can substitute a McDonalds milk shake.) But these RHRs were definitely unhappy about something on the other side of the portal, and that was enough for me. Man up, Bob, I told myself. I checked the camera again, double-checked that I had the basilisk firmware loaded rather than the charming novelty 3D snapshot firmware that had come with it, shifted from foot to foot. Thats when the moment of blinding insight went off inside my head like a flashbulb. I peered at the display back and frantically scrolled through the settings menu. Pinky and Brains, our departmental Mad Scientist unit, had somehow gotten hold of the original source code and hacked the basilisk functionality into it, hadnt they? It had to operate as a stereo camera, or the medusa effect wouldnt work, but normally I just left it on auto-focus. But had they left the original features the other features, like aperture, exposure, focus, special photographic effects intact? Because if so... Angleton cleared his throat right behind me and I nearly jumped out of my skin. Well, boy? he asked as I spun round. He was holding a small black binder, open at a page of peel-off stickers. Three of the five circular symbols had been removed, leaving shiny grease paper backing. I tried to look at the remaining ones but they gave me a stabbing pain behind my right eye. The thing on the other side of the door is pretty dumb, I said. I think I can take it out, if we open the door, but itll be touch-and-go. And if its actually inside the office, rather than on the other side of a portal with its end point in the office, it might make a mess of Leave that to me. Angleton hefted his book of stickers. Harrumph. What do you propose to do? I told him. Harrumph, he said again, and considered the idea for a few seconds before nodding. Yes, you do that, Bob. Ill sign off on the forms for the replacement kit tomorrow. Okay, I said. Turned towards the cowering crowd of Residual Human Resources. Heres how well do it. Eenie, meenie, minie, mo, catch a zombie by the I reached out with my mind and grabbed. He came, shuffling, reluctantly: an older, more withered corpse, wearing the dress uniform of a funereal military policeman. The original owner of the body was long dead. What held it upright now was a feeder in the night, a weak demon with a tendency to embed itself in (and take over) the neural connectome of its victims. I think it knew that I had a fate in mind for it, and not a pleasant one, but it was bound into the body by a geas, a compact of power that required it to obey my lawful commands. Hear ye this, I said, in my halting Old Enochian: define new subroutine basilisk\_grenade() as callback from operator(); begin; depress red button on front of payload; aim payload at self-face(); walk forward for ten paces; halt and retain physical control of payload indefinitely... I set the self-portrait timer on the camera to ten seconds, handed it to the zombie, and sent him into the grid and through the door to blow himself up. Then things got weird. ABOUT THAT STICKER BOOK: I want you to turn off the outer ward, boy, he told me. Then shove your zombie inside and turn it on again. And after another fifteen seconds I want you to turn it off. Can you do that? I nodded. I had the beginning of a throbbing headache: the crackling gibber and howl from beyond the portal, combined with the Residual Human Resources whining sense of dread at its undeserved fate, was getting to me. Controlling the ward at the same time wasnt exactly demanding but required focus especially in case anything went wrong. Okay, I said. Good. Then do it now. I switched off the outer ward, and the howl rose to a near-deafening roar, a silent arctic gale buffeting at my attention. Thou shalt advance! I commanded my blue-suited minion: Perform the operation as soon as the portal opens! Then, to the all-but-deanimated relic on the door handle: Open the door fucking right now! I shoved the full force of my necromantic mojo into the doorman, who twitched slightly and moaned something inarticulate and inaudible. So I shoved again. Im not sure I can describe exactly what it feels like to pump your will into an empty vessel, filling and inflating it and bringing purpose (if not life) back to lumpen dead limbs. The feeder was still there, so I wasnt entirely doing it from cold: but it was listless and tired, as close to exhausted as Ive ever felt. I rubbed my forehead and concentrated. Go! I shouted. The nearly twice-dead corpse lurched to its feet. Then it twisted the door handle and pushed, opening the path for my reluctant bomb carrier. Im not sure what I saw through the open portal. My memory is full of confused, jumbled-up images of tentacles and lobster-claws and crazy-ass stuff looking like

industrial robots made out of raw sewage and compound eyes the size of my head. I cant really say what it was, though, because my inner ears were ringing. It was total sensory overload, backlit by shimmering curtains of light and electrical discharges and the screaming of damned telemarketers in hell. Okay, I made that last bit up. But it was raw. Close, dammit! Close! I yelled in Enochian. The door-zombie moaned incoherently and stumbled, collapsing against the portal, just as a bouquet of tentacles reached across the threshold and wrapped themselves around my bomb-carrier zombie in something that was probably not intended as a loving embrace. My bomb carrier groaned piteously, with an inner voice so loud that I could feel it in my head even over the unholy din from the tentacle monster. I shuddered. Ive never actually seen something kill a feeder in the night before disembodiment is all very well, but something told me my minion wouldnt be coming back for sloppy seconds. But hed stepped up to the threshold, and he was carrying the basilisk gun, and hed pushed the self-timer start button... Close the fucking door before I invent a whole new hell to banish you to! I screamed at the door-corpse. (I am taking a liberty here. I had, and have, no idea what the Enochian for fuck is. Probably because the beings who invented that language didnt have anything remotely approximating mammalian genitalia. Even before their final extinction rendered the whole point moot.) I shoved, hard, with my mind. So hard, in fact, that everything began to turn gray and my earsmy physical earsbegan to ring. K syndrome here I come, I thought with a resigned sense of futility. Angleton was in front of me, approaching the edge of the outer ward, but I could tell this wasnt going to work. There was a soundless flash of light and a deep, resonant thud, as of a gigantic door slamming on the other side of a wall. I felt it in my gut as I stumbled. Another flicker: I couldnt see properly. Cut the ward, boy, cut it now! Angleton snarled over his shoulder. The ward? Oh, right. I fumbled with my phone and hit the off icon on the control app. The light show began to fade. Hang on, have we closed the portal? I asked. The door to Andys office was still half-ajar, a skeletonized hand dangling from the doorknob. Angleton stepped around the remains of the door zombie with the delicate gait of a man in expensive shoes avoiding a dog turd. He raised a hand: dust and bones and other disquieting shapes gathered themselves up from the pile on the threshold and rolled beneath the lintel, vanishing into the darkened space beyond. Angleton waited a few seconds, then pulled the door shut with his fingertips. Next he raised the black folder and delicately removed a decal. By the authority vested in me, he said, I declare this office closed. Then he carefully applied the sticker to the center of the door, and stepped backwards. Have we closed the I began to repeat, then stopped. Hang on. Whats going on? I stared at the mess of paint, charred patch of carpet, and graffitiid patch of blank wall at the side of our office area. Hang on, I repeated, backing up mentally. Wow. I took a step towards the wall. Angleton caught my arm. You dont want to get too close until its had time to anneal. Until whats had time? The ward I placed on Mr. Newstroms office. Class ten, he added, almost smugly. Class ten? Id heard of wards that strong: I didnt know we actually had any. Yes, boy. By tomorrow morning nobody except you, me, and Mr. Newstrom will even remember there was an office there and Andy will only do so because he left his coat inside. He clapped his hands together. I want you to prepare a report on this incident for me. But be a good chap and fetch Mr. Newstrom back inside first. I believe it has begun to rain, and as I mentioned, he doesnt have a jacket anymore. I WENT OUTSIDE AND HAULED ANDY IN, AND THEREAFTER WE didnt get much work done, apart from the inevitable clean-up and sending the surviving Residual Human Resources back to their crypt. Then I made an executive decision that Andy and I needed to finish the night shift by performing a destructive bioassay on the contents of a bottle labelled drain cleaner Id found in a drawer in my desk. After repeated oral analysis, we concluded it was mislabelled. It was a risky procedure if the bottle hadnt been mislabelled we could have made ourselves very ill indeed but certain traditions must be upheld. In particular, a young high-flying officer should not tell a former superior that theyve been bloody idiots without the plausible deniability lent by a sufficiency of single malt whisky. Even if its true. So whats your ten-percenter? Andy asked after I finished explaining precisely why he needed the refresher course on health and safety procedures when conducting summonings. Dont tell me youre working on an admin-side scheme? Actually, I am, I said, hoisting a shot glass in his direction: Prosit! Up yours. He took a sensible sip. No, seriously, theyve got you on the hook, too, havent they? Thats why you came in to work late? Actually they didnt. The ten-percenter thing only really applied to staff with actual postgraduate degrees. Id never finished my PhD, much less got to strut my stuff in a silly robe, but Id jumped on the bandwagon with a carefully muted shriek of glee. I had my own entirely selfish reasons. Andy might have selected his project because he was suffering from that peculiar version of impostor syndrome to which researcher-turned-admin bodies are prone, but for my part Id been bitten by a bug, and I needed a plausible excuse to spend 10 percent of my working hours on a scheme the suggestions box committee probably only authorized because

they hadn't understood the full implications. (I had. And it was fascinating. I wish I knew who had the idea first, so I could shake their hand...) Last year, a series of unfortunate events in Colorado Springs coincided with me being promoted onto the management fast track and earlier this year a series of even more unfortunate events derailed me from said track, dumped me on a jet-propelled skateboard, and shoved me onto the career progression equivalent of a crazy golf course played with zombies for putting irons and live hand grenades for balls. Since then I've been subject to matrix management by bosses in different departments with diametrically opposed priorities who still think I work under them, while trying to establish just what is expected of me by much more senior people who think I work for them. It's extremely fatiguing, not least because the furrow I'm ploughing is so lonely that nobody's actually written a skills development manual for it: the Laundry is about procedures and teamwork and protocol, not super-spies and necromancers. I'm on the hook to the extent that I want to be, I confessed. Lockhart insisted, actually. Told me I'd never get anywhere unless I set a course and stuck to it, to use his words. And Angleton just laughed, then told me to fuck off and play with myself. Angleton said Andy's eyebrow twitched again. No, that's me; his actual phrasing was more... Schoolmasterly was the word I was hunting for. A long time ago, Angleton spent a decade teaching in the English public school system (the posh, private school system, that is) and it had rubbed off on him along with the extra special version of sarcasm generations of schoolmasters have distilled for keeping on top of their fractious charges. (Even his current nom de guerre, Angleton, was chosen with irony in mind: it irritated the hell out of our American opposite numbers, because of the one-time CIA legend of the same name. Really, he ought to be code-named SMILEY or something.) But anyway, he gave me carte blanche, and my other boss expects me to I waved my hands, nearly knocked over my glass, and caught it just in time. No, that's not right. He just expects me to keep myself busy between External Assets jobs. Paper clip audits. Andy took a sip of Laphroaig. I didn't bother to correct his misapprehension: External Assets, which Lockhart runs, is about paper clip audits the way the FBI is about arresting thieves, i.e. not at all but it's extremely convenient for them that most people outside the organization don't realize that. Sounds to me like they want to see what you can do. Hmm. Rueful amusement tugged at the sides of his lips. So what are you going to do? I'm building a spreadsheet. One with a lot of very interesting pivot tables. Andy peered at me with an expression of mild disbelief. Getting clearances for the data to feed it is a bitch, and it's anybody's guess whether it's going to deliver anything useful, but if you don't ask you don't get... Ask for what? He hunched down in his chair. He was still a little shaky from the events of a couple of hours ago, despite all the whisky. You've always hated admin work. It's not admin; it's data mining. I smiled blandly. Big data, forward threat analysis. It's a really neat idea from the suggestions box my hat's off to whoever came up with it. What I'm doing is proof of concept; there's no way I could get a budget to do it properly. But if it works, then I can present it for discussion and maybe get something rolling. Threat analysis and data mining? Andy isn't easily impressed: he has a habitual pose of arid detachment, an expression of distant amusement as if the slings and arrows of office politics (and the tentacles and curses of sudden-death engagement) are merely flying all around for his entertainment. But I'd got his undivided attention tonight: rescuing him from sudden death did that. What kind of threats are you hunting, and where? I'm looking for outbreaks. Not sure what, or where, so I'm trying to spread the widest net that comes to hand. Anything peculiar. A rash of spontaneous human combustion in Stevenage, or rabies in Ravensthorpe; could be anything. The point is to try and build a tripwire for anomalies. But the police already He stopped. I shook my head. Not the police. Sure they'll be on the line as soon as they confirm a fire-breathing lizard has come ashore in Liverpool, but what about the other stuff? We live in dangerous times. What got me thinking was, how many of the sort of problems we get called in to piss on start out small and get treated by the wrong emergency services? Body snatchers in Bath, zombies in Zurich. My metaphor engine had just broken: I took another sip of whisky. A lot of possession cases show up as anomalous behavior, and while the ambulance service often brings the police in, it's frequently mis-categorized as a mental health issue. So I'm trying to work out how to mine the National Health Service data warehouses for early signs of demonic possession. That's what the task was about. Everybody knows vampires don't exist, it said: develop a data mining utility to provide three sigma confirmation of the null hypothesis based on evidence from the NHS Spine. I don't know who put it on the stack but it's inspired! I mean I couldn't have come up with a better ten-percent project if I'd designed it myself. Andy stared at me slack-jawed for a couple of seconds, then raised his left hand and theatrically closed his mouth. Refill time. He shoved his glass across the desk, towards the bottle. Then you're going to tell me why you're telling me this. You haven't guessed already? It was my turn to raise an eyebrow. You need a minion to run interference for you with the nice Data Protection Commissioner with the taser, right? Right.

I topped up his tumbler. He hesitated momentarily. Deal. Because its crazy but it just might work, and it sounds a fuck of a lot less dangerous than what I was working on turned out to be. What could possibly go wrong? WHICH IS WHY, IN THE END, ANDY DIDNT GET TO DEMONSTRATE his coding chops by summoning up an Eater. And why I eventually sneaked my way into the clearances I needed to log onto the SUS Core Data Warehouse. And, ultimately, why all the deaths happened. 2. MEET THE SCRUM HOW IT STARTED: ONE MONTH AGO. Hey, Alex, did you hear the one about the dyslexic sailor? No He spent the night in a warehouse! Alex threw a bean bag at the joker John who caught it out of the air. Their supervisor was unamused: Pigs! said Mhari. Its okay, hen, were committed, said John. Then she laughed. You will be. It was lunchtime in an open-plan office, eight floors above the lobby level of a tower in Canary Wharf. North of Barclays, west of Santander, deep in the beating heart of global commerce. The office was a small clot of strangeness congealed in the pulsing circulation of an investment bank. They were in the bank, but not quite of it, this scrum of half a dozen Pigs and Chickens. They wore the suits and sometimes talked the talk, but held themselves apart; and when they left at night, they passed through a glassed-in corridor lined with metal detectors before they retrieved their personal phones and wallets and watches from metal lockers beneath the eyes of security guards. Some of them had worked in proprietary trading before joining this group; others had come straight out of academia, trailing the long shadows of student loans behind them (taken on by the bank as part of their golden handshake). But now they were in the bank but not of it, for the Scrum were not permitted any customer-facing contact at all. Indeed, they were employed by a shell company, the better to enable the parents corporate management to deny their very existence. There were other signs of distinction about them. Their hours were not governed by the ring of the trading floor bell in Paternoster Square, or any other market for that matter. (Electrons never sleep.) Nor did they directly support any of the parent institutions trading teams. They had a designated Product Owner, it was true, to whom the Scrum Master (or in their case, Scrum Mistress) was answerable, both for handover of deliverables and negotiation of new goals, and the Owner actually worked with a committee of traders and analysts. But the office was carefully structured to keep the members of the Scrum as tightly insulated from their parent organization as possible. That way, deniability could be maintained for as long as possible. I WASNT HERE, I DIDNT SEE THIS, AND I CAN ONLY OFFER THIS fictionalized reconstruction, dredged from the turbid depths of my imagination and seasoned with facts. I got to sit in on the autopsy later, as we uncovered the gruesome history of the Scrum. Not that it was particularly awful, up to this point. So, an investment bank has a bunch of in-house proprietary trading teams who specialize in taking positions on the basis of quantitative analysis of which way the markets are trending? Theres nothing illegal, immoral, or fattening about that. Investment Bank has a group who work on minimizing the latency in their trades, to reduce the market spread? Ditto. Algorithmic trading teams shoveling out and revoking put offers every few milliseconds to see what falls out of the high-frequency trading tree? Were getting into dubious territory here, but everyone else has been doing it, ever since the Yanks deep-sixed the important bits of the Glass-Steagall Act and their commercial banks all sprouted high-stakes gambling arms but thats ancient history. The point is, the Bank wasnt doing anything they shouldnt have been doing, at least within the context of the crisis of early twenty-first-century capitalism. Until we get to the Scrum. A scrum genericis, depending on which dictionary you look it up in, either an elaborate way of restarting play in a rugby match (rugby: sort of like American football only with less body armor and more biting and gouging I was forced to play it at school: did wonders for my character), or one of the quirkiest cognitive disorders to which software project management is prone. The rugby version involves getting head-down and having a shoving match with the other side, sometimes involving ear-chewing, scrotum-grabbing, and neck-breaking (although the latter is frowned upon); the software variant is not dissimilar. It has its origins in Agile methodology, although its Agile hopped up on crystal meth and spoiling for a fight: exactly the sort of thing youd expect a bunch of city high-flyers to find appealing (at least in principle, and as long as it didnt look likely to detonate a large landmine under their bonuses). The Scrum, singular, was the brainchild of Oscar Menendez, the vast unsympathetic brain at the heart of The Banks Data Analytics Support Division, and sometime Algorithmics star. Back in the prehistory of the early noughties they headhunted him from Google to show them how to apply map/reduce to the very large data sets they were processing in real time (Youre not listening, are you? Damn it, I suffered through the briefing. I dont see why you shouldnt have to suffer, too!) Moving swiftly forward: the Bank set up the Scrum to try and bring some of the culture of an agile, highly responsive software start-up to bear on the job of developing new and improved tools for high-frequency trading. The Scrum was elite; the Scrum had esprit up to here; the Scrums long-term planning threshold was about twenty-four hours, marching to the beat of

the daily stand-up meeting. They had a monstrous array of high-power data mining tools, live feeds from every exchange on the planet, their own individual compute-server farms. They had a PhD to headcount ratio close to 1:1 among the pigsthe hard core of math quants and algorithm developers. And every day they went in search of new and better techniques for identifying patterns in the data, trends that might be good for an extra 0.1 percent margin on every transaction for the handful of seconds it took before their competitors cottoned on. They were brilliant, widely read, incisive, and effortlessly effective analysts and programmers. Which is another reason why, ultimately, so many people died.

**PICTURE ALEX, ALONE IN THE OFFICE ONE EVENING.** Picture a twenty-something with spectacles and the remnants of a late heavy bombardment of acne cratering the 80s designer stubble under his jaw. The spectacles are, of course, aggressively black-rimmed and thick-lensed. His suit is expensively tailored, his shirt of finest quality linen, and the collar is just slightly askew, because Alex has an image to defend: that he is a quant, that he is Oscars intellectual successor, that his mind soars as high above such mundane preoccupations as the City institutions dress code as an SR-71 roaring on Mach 3 afterburner across the abstract vistas of category theory and algebraic topology. Its actually a total bluff. Like many truly brilliant minds, Alex suffers from an inordinate case of impostor syndrome, with mild hypochondria on top. He routinely arrives in the office each morning as a sweaty, seething blob of fear, certain that at any moment one of his colleagues will expose him as a fraud, unable to prove something as basic as  $A_n = B_n + C_n$  for any arbitrary integer  $n$ . Hes convinced that the reason he doesnt have a girlfriend is that he has halitosis. (He doesnt; the real reason is that he works over fourteen hours a day, six days a week, and spends the leftover hours sleeping, eating, and trying not to fall apart.) And he used to think that his acne was a symptom of malignant melanoma; every winter cold is multidrug-resistant tuberculosis. Right now hes a bundle of pure anxiety because of his salary. Hes theoretically due for a bonus determined by the overall financial performance of the entire Scrum at the end of the financial year but his basic salary of a little over 60,000 seems as dwindlingly inadequate as a Jobseekers Allowance when stacked up against the Croesian excesses on display in the basement car park. And he gets to see the basement car park every morning when he chains up his bicycle after cycling in from his room in a house in Poplar. Hes only been in the City for ten months (although it sometimes feels like a life sentence superimposed on a millisecond), and the habits of impoverished frugality he learned as a student weigh him down even as he tries to put on a good face for the people he works with. You wouldnt want to be Alex. Being Alex, aged twenty-four and alone in the City, is awful. But being Alex in three hours time is going to be much, much worse and hell still be alive to feel it.

**ONE OF THE GREAT BESETTING PROBLEMS OF THE MODERN AGE** is what to do with too much information. This is especially true of high-frequency share trading, where every second a Sahara-sized sand dune of data must be gulped down and sifted for the fragrant cat-turds of relevant market movements. The ebb and flow of share prices is familiar from a thousand ticker-tape parades and ever-shifting number grids, but that barely scratches the surface of the problem. Your stake in a corporation that makes robot milking machines for the dairy industry can be affected by a press release from an upstream supplier announcing a better image recognition algorithm for udders. Or by a newspaper article in which a farmer explains that, because the release cycle for new cows (nine months and one week) is shorter than the release cycle for new udder-recognition software (eighteen months), theyve been breeding cows for teats that are compatible with robot vision systems. Or by a supermarket capping the price of dairy produce, leading to a liquidity crisis in Ambridge. The Bank had been addressing the problem of drinking from the data firehose for many years, of course. Indeed, one of the Scrums major tasks was to develop the banking equivalent of a self-cleaning litter tray: tools to help traders visually explore dizzying multidimensional arrays of ever-changing data without oversimplifying it into uselessness or causing them to throw up last nights Premier Cru.

Revue de presse Praise for *The Rhesus Chart* Stross has pulled off yet another fast-paced blend of espionage thrills, mundane office comedy, and Lovecraftian horror, throwing in so many ideas per page that it may well leave your head spinning... [T]his is yet another ferociously enjoyable romp from a writer whos showing no signs of slowing down or losing his touch. SFXA quirky, slightly crazy, but captivating cerebral supernatural thriller... Its nothing short of brilliant! I couldnt stop laughing as Bob works his way through to the final thrilling conclusion. *The Rhesus Chart* is a hilariously original approach to both the supernatural and vampires. Fresh Fiction Entertaining. Publishers Weekly More Praise for Charles Stross and *The Laundry Files* Charles Stross is awesome and his books are awesome and his *Laundry Files* series in particular is a hell of a lot of fun. New York Times bestselling author John Scalzi Smart, literate, funny. #1 New York Times bestselling author Lev Grossman, Time Thumbs up for a smart and engaging novel that continues a very smart and engaging series.

Highly recommended.Tor.com