

**THE
RESTORATION
GAME**

KEN MACLEOD

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GAME



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To Carol

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Exploit (online gaming)

In the realm of online games, an *exploit* is usually a *software bug*, *hack*, or *bot* that contributes to the user's prosperity in a manner not intended by the developers.

Wikipedia (accessed February 6, 2008)

FIRST-PERSON SHOOTER: MARS, 2248 A.U.C.

Behind you the module burns.

Before you . . .

Cold. Unimaginable, bone-chilling cold. The sun so small, so far away. The land and the sky bleached of colour, drained to faint red or blue tints on varied shades of grey.

You shiver in your vacuum armour. The forced landing has jarred its systems. Your heads-up display flickers then stabilises, showing at the top your name, rank, and mission:

Daphne Pontifex. Centurion. Take and hold whatever remains of Syrtis Major Laboratory. Implement emergency procedures on any ongoing experimental work.

Beneath, the heads-up display diagrams your tactical team's details and current position. Three men, two women: the heavy, hard head of the spear, of which you are the very tip. The shaft, on this metaphor, being the fourscore marines handling logistics and fire support from orbit.

The ruin of the laboratory is half a mile in front of you. Unlike the crippled module, it has no air bottles to feed a fire: the space-to-ground missiles have left it wrecked, not burning.

At your command, the team skirmishes forward. You take down two pop-up robot defenders. Hector O'Donnell on the right flank and Fatima Fortunata on the left despatch five more. You bypass the ruin and sweep the area behind it.

"All clear," you announce.

Through the gaps in the walls and into the rubble. One last pop-up scorches Hector with a laser beam; Caesar Abdullah takes the robot out. You proceed to trash the varied bits of manipulatory apparatus that have survived the bombardment.

And that's it. The renegade Synthetic Psyches are still there, humming in their hardened servers. Without real-world effectors and without comms,

they're helpless. The science teams will negotiate with them in due course. It's the SPs' work that you need to deal with, *fast*.

Leaving the others on guard for any surprises, you and Hector clatter your way down the iron stairs into the lab basement.

Low ceiling with heavy I-beams. Weak blue light shows dust specks still falling. The experiment bench with a massive, isolated server atop occupies the centre of the room. LEDs flicker red, blue, and green, indicating that something is running on the server. No one knows what it is. Suspicions are dark. For a group of SPs to break their decades-old compact with humanity, it must be significant, and sinister. The worst case is that what's running in there is an SP unbound by the emotions and ethics that might have inhibited its creators.

You give Hector the go-ahead. He knows you have to be ready to shoot him if something goes wrong. You see his grim expression through his sheet-diamond faceplate. He nods and steps forward. He shrugs away his weaponry and lays it on the floor, then brings over his shoulder from his backpack a heavy chunk of firewalled interface equipment.

Patiently, he connects cables to the server's input-output ports. The display screen of his device brightens. He peers, makes adjustments, brings diagnostics to bear. His gloved fingertips rattle on the alphabet board. You keep your carbine's aim on the small of his back.

His mutterings give way to a sharp intake of breath.

"Heroes below!" he whispers.

"What is it?"

"It's worse than we thought."

He keys in some final bit of code, disengages from the diagnostics kit, and turns around slowly. You lower the weapon. Behind blue reflections in the faceplate his face looks stricken.

"What is it?" you repeat.

"It's the most evil, unethical experiment you could imagine. A simulation. Millions—billions!—of fully conscious simulated humans living a history where . . ." He shakes his head. "I don't know. Something didn't happen. Something changed everything. The history's still far in the past, thank heaven—a millennium, perhaps. But almost unrecognisable. The city's in ruins, the population tilling the soil and ruled by warrior chiefs, their minds dimmed by some death cult."

You have known of this possibility, of simulating human minds in a virtual reality that will be real to them. Not even SPs have hitherto dared attempt it. You're shocked and awed, but you cut to the crux: "What's its clock-speed?"

"Real times ten thousand."

You almost drop the weapon.

"While we've been talking—"

"No, no," says Hector. "I've slowed it to Real. I've inserted some scrutiny code, in an obscure location. A placeholder, while we consider what to do. This is a job for the scientists."

"And our job?" you ask.

Hector raises his hands. "It's over. There's no threat to security here."

"You're certain?"

"Sure as I can be."

If Hector says it, that should be enough.

You transmit the "Mission accomplished" signal to orbit. Hector sends his results to the science team. Within minutes, new orders come back.

You're to await a supply-drop for a base camp, the arrival of a science team. Your squad will apply its own expertise to helping the scientists investigate and intervene in the history simulation.

Excitement crackles around the squad's comms. These new orders mean the squad's bold actions have earned it enough points to proceed to the next level.

Two local days later, everything's more comfortable. Everyone's out of their armour. The Syrtis SP lab is sealed in an Impervium diamond dome. Life-support is up and running. Reliable robots are deployed to guard the site. Others are repairing the damaged attack module. The renegade SPs are being interrogated through thickets of firewall. Hector and two scientists—leading specialists from Alexandria—are probing the simulation.

Then one of the scientists makes a mistake.

Disaster strikes. Billions die.

They die because the simulated history flips into a high clock-speed. By the time the mistake is corrected, the simulation has advanced a millennium and a half. It's now centuries ahead of the Real in time, centuries behind in

civilisation. Empires have risen and fallen, wars have swept the world. The city's language has shattered into mutually incomprehensible barbaric dialects. The translation modules have barely kept pace.

You listen to the shocked reports. The only good thing you hear is that the clock-speed has been slowed again, this time to a tenth that of the Real.

"So," you summarise to the shame-faced scientists, the Alexandrian experts, the top people in the field, "you have brought those poor creatures to the brink of disaster. Nuclear war, ecological catastrophe, and what else? Oh yes—cultural calamity, as they discover that they *are* in a simulation. How long will it take for that to dawn on them?"

"Blame the SPs for that," says Andrea Memmius, certified sage of Alexandria. Her tone is sulky. "They used an off-the-shelf navigational package as the basis for their extrasolar astronomy simulation. Naturally it is Ptolemaic. They were not to know—"

"That their virtual creations would one day send probes to the edge of the solar system? That they might just notice that the galaxies are spinning too fast? That the underlying physics of their world are inconsistent?"

"So far," says Caro Odoma, the other Alexandrian, "the sim-people have shown remarkable creativity in rationalising these . . . dark matters!" His sidelong glance shares some private joke with his colleague, to your intense irritation. "They're resilient—I wouldn't worry about cultural calamity."

"No indeed!" you snap back. "I'd worry about their dying by the decamillion in agony!"

Hector clears his throat. "Daphne," he says, breaking protocol but you're past caring, "there may be a way for that to resolve itself, because of something we did already. . . ."

He outlines his schema. You listen, hoping against hope that it'll work—that millions will not perish. That somehow, this appalling history can be set back on a reasonable course.

And, of course, that you won't lose points.

PART ONE: BLOCKING

1. PAGING LUCY STONE

1.

I was just out of Arrivals and eyeballing the Remarkables above the Queenstown terminal roof when the PA system called my name.

“Paging Lucy Stone . . . Passenger Lucy Stone, just off Flight NZ03 from Auckland, please go to the Airport Information desk.”

I stopped dead. My rolling case, in accordance with Newton’s first law of motion, kept rolling and collided painfully with my calf muscles. It then rebounded (third law), toppled over (second law), and made me stumble (Murphy’s law). As I squatted to recover the case I wondered wildly what I’d done wrong. My passport was in date, my card hadn’t coughed at the ridiculously cheap internal flight ticket, and I didn’t have any drugs or weapons (apart from the Leatherman Juice ladylike, natch) or animal or plant matter. Could it have been the shower gel? New Zealand’s a war-on-terror state but didn’t, as far as I knew, share the British and American exploding shampoo bottle and nitroglycerine-in-the-Evian paranoia du jour.

Speaking of paranoia, it didn’t so much as flit across my mind that this might have anything to do with the Other Thing. I’d put two oceans between me and the Other Thing.

There was a ball of nickel-iron bigger than the moon between me and the Other Thing. There was a whole *planet* between me and the Other Thing. No, the Other Thing was definitely partitioned off elsewhere on the hard disk of my spinning mind as I rocked the case back on its wheels and stood up.

Another name and my name sounded across the parking lot, from different loudspeakers like an echo: “Alexander Hamilton . . . message for Lucy Stone . . . Alexander Hamilton . . .”

I straightened, clear in a swift conviction of what was going on. Alec Hamilton. Love of my life had stood me up. So much for the hair down and the pretty skirt. I scrunched a severe ponytail and marched, case on its leash, back through the sliding doors and over to the Information desk.

“Hi,” I said, slapping down my open passport. “Lucy Stone. There’s a message for me?”

Black eyebrows arched to a black hairline; slate-grey uniform shoulders shrugged. Over the top of the desk I could see her graphite-pencil skirt. Neat, neat. Maori stewardess, cuter than me.

“Oh yay,” she said. An opal oval fingernail swivelled a scrap of paper. “Ms. Stone. For you.”

I stared down at it, read it, then picked it up, holding hard on my hand’s tremor.

“Thank you,” I managed to say, from a dry mouth.

She bestowed me a smile and I gave her a rictus back. I turned around and walked out again, knees shaky as a newborn lamb’s. I sat down on a bench facing the parking lot and the not-Remarkable mountain straight ahead. I looked down at the paper again. NZ Airlines headed notepaper with a message in a careful hand that belied the words:

Please tell Lucy Stone that Alexander Hamilton has been unavoidably detained with friends from the East.

That, and a telephone number.

The pretty skirt’s lap was vibrating like a drum. I clutched my knees. The shaking spread to my elbows. Coming here and finding Alec had been for me an idea of escape. It had been in a different world entirely from *all that other stuff*. Alec had been in a different world. He’d known nothing, nothing at all, of my other life. I’d thought I’d been shielding him from it. I had been shielding *me*. All the partitions in my mind went down. The Other Thing was not on the other side of the world. It had followed me. It was here, and it was coming for me through Alec.

2.

There is no such place as Krassnia. If you were to draw it on a map, right where the borders of Russia, Abkhazia, and Georgia meet, and then fill it in, you’d need a fifth colour. On the other hand, Krassnia is a real place. I know,

because I've been there; heck, I was born there. It has an official name, for the day when everyone's embassy recognises it (they won't): the Former Soviet Autonomous Region of Krassnia. FSARK. Look familiar? It should. Walk down any high street in Europe and you'll see these letters in black lowercase: *fsark*; on red plastic shopping bags, distributed free by the million in a rare fit of marketing nous by the Popular Department Store. All that the Store (Krasnorglav) needs to do now is get people to actually put its wares in the bags; which, since its bestselling lines are pirated CDs and Chinese and Vietnamese fakes of big-name luxury brands, could prove tricky. (There's also the fact that the bags themselves were the result of an accidental five extra zeroes in an order placed with the recently privatised plastics factory, KrasNorPlasKom.)

More about Krassnia later. For now, you only need to remember two things. First, you won't find it on the map, except on very detailed old maps of the SU and maps made by the Krassnian Ministry of Information (Kraskomfakt). Second, I was there when I was very young, and I've been back. Oh yes, I've been back. But when Amanda called, I hadn't been back. Except in dreams. The dreams mattered, as it turned out.

Home, late. Me on the sofa, laptop on my knees. Thai takeaway half eaten, remainder fit only for the fridge and the microwave if tomorrow was the same as today. Cherry smoothie likewise congealing. I was test-playing the raw version of the gory first-person slicer (Dark Britannia, sword and sorcery, barbarian-Arthurian grail quest with Roman-legionary revenants and Pictish zombies) that we hoped would make our fortune, and ticking boxes and noting glitches when the Skype icon winked. The caller ID was Mom.

I saved the action midchop (blue skin splits! green blood splatters!) and opened the speaker.

"Hi, Mom."

"Oh hello, Lucy. Everything's all right."

(Amanda always says that. I appreciate it.)

"I'm fine too."

"It's late where you are."

"It was you who phoned, Mom."

"Oh! Yes. Well." She made one of her us-girls-together noises, which I think is achieved by a light, throaty laugh while rubbing the phone through the hair behind her ear. It's usually a bad sign. "Do you remember Krassnia?"

“Of course I do. We left when I was what? Seven?”

“Seven, yes. So it was. But do you remember the language?”

“I’m not sure.”

“Do you ever *dream* that you’re there?”

I stared at the screen as if the Eye of Sauron had just opened and closed on it. “What?”

“Seriously.”

I closed my eyes, leaned back on the sofa, and thought about it. “Yes, I suppose I do.”

“What?”

I leaned closer again. “Well Mom, yeah, I don’t pay much attention to dreams, but as it happens, yes, whenever my unconscious or my brain’s offline processing—or whatever it’s supposed to be these days—wants me to dream about dark valleys or endless mountain slopes or long corridors where something really scary and official is waiting for me and I’ve missed my appointment and . . . yes, I guess I do go back there.”

“Great!” she said. “And what language do you dream all that in?”

“I don’t . . . Wait. Russian, I think.”

“Think harder.”

I blinked hard. Amanda not being an early adopter, of video or anything else, the gesture was of course wasted.

“It’s a goddamn dialect, Mom!”

“Language!” she chided, ambiguously. “Anyway, not to worry. You’ll pick it up again in no time.”

“Why,” I asked, “would I want to pick it up?”

“I want you to write—is that the word?—a game scenario in it. Written in Krassnian and based on Krassnian legends. You know, like in *The Krassniad*.”

The Krassniad is Amanda’s one and only commercial success. After she’d completed her PhD (“Myth, Memory and Ideology in the Krassnian Autonomous Region: An Investigation”) and failed to get it published even as an academic book, she’d had the bright idea of doing for Krassnia what James MacPherson had done for Scotland a couple of centuries earlier with the poems of Ossian. She’d taken the raw material of her notes: snatches of poetry still mumbled from the gap-toothed gobs of mountain bards who claimed to have been born in the reign of Tsar Alexander II; such fragments

of illuminated manuscript as remained in Krasnod's Museum of the Peoples and in the two Orthodox monasteries that hadn't been turned into Houses of Atheism; and in the one surviving copy of *Life and Legends of the Krasnar*, compiled in the 1920s by Krassnia's leading Bolshevik ethnologist (shot in 1937)—all that and more she'd cobbled together and "freely translated" into English as *ancient lays*, into even what you might call a *national epic*, which was instantly banned in Krassnia (even in English, even under democracy) and enjoyed a brief vogue with the Mind, Body, Spirit crowd for its ancient wisdom and shamanic spirituality and among Hell's Angels and gaming geek-boys for the sword fights and the sex bits.

"You mean that hasn't been done already?" I asked.

(Not the most cogent of questions, but the one at the top of the stack.)

"No, it *hasn't*," said Amanda, sounding exasperated. "The book's out of print in the US, and it's still banned in Krassnia, not that that makes much difference these days. . . . Anyway, nobody outside of Krassnia is interested in writing a game for it—the market's too small—and nobody inside of Krassnia is interested in anything but Western and Japanese games. So whoever developed it would have that market all to themselves."

The cat ambled in, stretched himself onto the coffee table, and nosed at the foil containers. I swatted him away. He glared at me from under the stereo.

"A market you've just said isn't big enough. The game wouldn't break even."

"I happen to know it would," Amanda said.

I recognised that tone. It wasn't one that expected to be questioned.

"If you say so," I said. "But who would actually develop it?"

"That company you work for," she said. "Digital . . . Fist, yeah?"

"Digital Damage Productions," I corrected, abstractedly. "The fist is the logo."

Then I caught up with myself. "But we're just starting! Why not—?"

"Go to one of the big-name companies? You know why not."

I did, too. "OK," I said. "I can see that. But—"

"Look, Lucy, give me a minute to explain how this is gonna work. You told me ages ago that Digital . . . whatever was working on some kind of dark fantasy fighting game, yeah? Heroes with swords, craggy landscape, gloomy ruins, spectres and slime, right?"

"Yeah," I said. "Dark Britannia."

“Right!” she said. “All you’d have to do is change the landscape map, tweak the costumes, plug in Krassnian dialogue and prompts, rename and rejig your demons and dwarfs and so forth, and there you have it, tah-dah!—Dark Krassnia!”

Now this was actually not a bad idea, and one very much along the lines that Sean Garrett, the PTB (Pony-Tailed Boss), founder and genius and hard taskmaster of DDP, had been thinking aloud about for months. Aloud is more or less how he does all his thinking, and you can occasionally interrupt this stream or rather torrent of consciousness and break it up into something that could from a distance be mistaken for a conversation (another word for which—here’s a clue, Sean—is *dialogue*) and one component of such sequences that you could have drag-and-dropped into more or less any of his recent rants and rambles was: *You know, when this thing takes off we can franchise it out for local adaptation in every fucking country in the world that has a Dark Age heroic mythology and you know what countries that leaves out? Only the ones that are still in the fucking Dark Ages! Ha ha ha!*

“That’s by no means all,” I said. “And I don’t see us doing it while we still don’t have Dark Britannia done and dusted. When do you need it?”

“Middle of June,” she said.

“Four months? No way!”

“It can be as quick and dirty as you like,” Amanda said. “We’re not talking a flagship release here. Digital could even claim it had been pirated. Come to think of it, that’s probably . . . hmm . . .”

“The money would have to be good,” I said. “If I’m going to pitch it to the lads.”

“Fifty thousand on agreement, hundred thousand on delivery.”

“Pounds? Euros?”

“Dollars.”

Oh well. Still in not-to-be-sneezed-at territory, for a company as small as ours.

“I think I can make that fly,” I said.

“Oh, don’t *you* try selling this to the team,” said Amanda. “My people will talk to *your* people, OK?”

A couple of questions will have occurred to you. One: how is this lady professor of cultural anthropology or whatever going to come up with a hundred

and fifty thousand dollars? Two: what does she want with a multiplayer online role-playing game in Krassnian in the first place?

They occur to you, but they didn't occur to me.

The only question that occurred to me was: hmm, so what's behind the CIA's sudden interest in Krassnia?

I already knew the answers to the other two, because I already knew my mother was a spook.

3.

Not that it hadn't been a bit traumatic finding out, at the age of thirteen, right in the middle of my rebellious, weed-smoking, body-piercing, diary-keeping, two-fingers-down-the-throat puking, hormone-churned huff at the world. If this scene was in a movie they'd need to cast a different actress, who'd be in the credits as Teenage Lucy, and rummage up a roomful of late-nineties kipple. So you imagine me sitting on my bed, chin on knees poking through the cultivated distress of my jeans, leaning on a big batik cushion and facing a Kurt Cobain poster on the wall opposite. The Cranberries are messing with my head through earphones the size of earmuffs. I'm reading a thick Guy Gavriel Kay paperback. Scene set? Good. Enter Amanda, after a token knock.

I scowled at her and saw her lips move. I stuck a thumb in the book and reached around the back of my head and prised away Dolores's dolorous lyrics.

"What?"

"There's something I've been meaning to tell you," Amanda said, looking awkward.

"I know," I said. "Don't smoke. Do my homework. Use a condom. Eric isn't my father."

Wow, that one worked. I could see her flinch. I almost felt sorry for her. Almost. But I was cruel then.

"That isn't . . ." she said.

"That wasn't . . ." she added.

"How do you know?" she got her act together enough to ask.

“Mom, I’m not *stupid*,” I said.

She didn’t inquire further on that point. She came and sat down on the only other seating in the room, an old beanbag opposite the bed, sinking so far that I had to lean forward to see her face.

“What I’ve been meaning to tell you,” she said, “is, um . . . it’s about Krassnia. We had some good times there, didn’t we?”

“Yes, Mom, I had a very happy childhood there. Until you took us away from it.”

She winced again. “It wasn’t my choice. The place looked like it was about to blow. All US citizens were advised to leave.”

“And nothing happened.”

(Apart from the scariest day of my life, which rather undercut my point, but Amanda ignored that opening.)

“We didn’t know that then,” she said. “Anyway”—she chopped with her hand, looking impatient—“that’s all beside the point. I’m not going to let you rake all that up again. This is about something that really does concern you. It’s about what I was doing in Krassnia in the first place.”

She leaned back farther into the beanbag, as if to make sure that if I were to make some sudden movement, she would be out of range.

“Your research?”

“Kind of,” she said. “Um, well. My research wasn’t just for my thesis, and it wasn’t just about, you know, all that ancient stuff. I was sending a lot of it to, well, someone at the US embassy in Moscow. Someone who sent it all back to, um, to Langley, Virginia.”

“You were a *CIA agent*?” I shrieked.

“The correct term is ‘asset,’” she quibbled. “But, yes, that’s about the size of it.”

The implications weren’t really sinking in yet.

“Why are you telling me now?” I asked.

“I’ve been exposed,” she said. “A guy at Langley has been arrested for working for the Russians, and for the Soviets before that, and he’s confessed. He gave the Agency a list of the people he exposed.”

“And your name’s on the list?”

Amanda nodded. “Uh-uh. None of this is public, OK?”

“So why are you telling me?” I demanded. “Am *I* on it? Are you in danger?”

“No,” she said. “People I worked with, yeah . . .” She chewed her lip, looking up to a corner of the ceiling, and sighed. “Some of them have been arrested already.”

“But Krassnia broke away, didn’t it? Why should they care about anyone’s spying on the Soviet Union?”

“Hah!” said Amanda. “It broke away, sure, but it huddled close to Russia. And the local secret police are still the old Soviet secret police, just with new initials.”

“Why do I have to know this?” I was really pissed with my mom for laying this on me.

“Because,” she said, “you might get approached, sometime. Leaned on, I don’t know, pressured in some way. Maybe asked to do something a little bit illegal, then blackmailed into doing something *really* bad, and then . . .”

She waved her hands about, frowning.

This all struck me as suspiciously vague.

“This isn’t just a way to stop me smoking blow, is it?”

“No, Lucy, it’s not!” She looked thoughtful. “But that would help. Anyway, tell me if anything unusual happens in your life—anything at all.”

How was I supposed to know what was unusual? I glowered for a bit, then a line of attack came to mind.

“Why did you work for the CIA anyway?” I asked. “They were killing and torturing people back then, in Salvador and shit. I’ve read all about it.”

“I’m sure you have,” she said. “The Russians were doing worse, in Afghanistan and shit.”

“I’ve read about that too,” I said. “It’s no excuse.”

“Look, Lucy,” Amanda said. “I’m—I was just doing what any good American would—should—have done. I was letting my government know about important developments, matters they really needed to know about to keep America safe. And, I might add, to help people in Krassnia who were suffering under the Soviets, and who might have suffered even more in the aftermath if we hadn’t—if our government hadn’t had a good idea of what was going on, among the mountain peoples, the ethnics, and so forth. You can see what’s going on in Yugoslavia, in Chechnya, and places like that. None of that’s happening in Krassnia, and I think the work I did had something to do with that. What the Agency may or may not have done or con-

done in other parts of the world has nothing to do with me. So my conscience is clear.”

She didn't quite add, “young lady!” but I could hear it in her tone. With the result that I argued right back, and we both ended up yelling at each other. This was fairly typical of how we got along then.

So after the inevitable door-slam I got on the phone to vent my annoyance into my favourite sympathetic—if slightly deaf—adult ear, that of my great-grandmother, Eugenie. (My grandmother, Gillian, was and is the most conventional whitebread housewife I've ever met. Totally different from her daughter and from her mother. You'd almost think there's some kind of generational rebellion thing going on.)

“Mom just told me—”

“Stop!” Great-Grandma Eugenie cried.

“What?” I said. “I just wanted to—”

Great-Grandma Eugenie said: “I *know* what you want to talk about, Lucy dear. Please don't! It's not really a suitable subject for you and I to discuss. Now, tell me how you're doing at school.”

I did, with ill grace. After clicking her tongue at my grades and chuckling sympathetically at my surly remarks about certain girls who were, like, totally making my life a misery, Eugenie said quite casually: “Oh, Lucy dear, wouldn't you just love to come up to see me? Just name a day and I'll pay for your Greyhound tickets.”

A couple of weekends later I made that trip. Up Saturday, back Sunday.

Eugenie told me some things about *her* visit to Krassnia, back in the 1930s, along with quite a few little details of her life story that she'd never told Amanda.

(Oh yes. My great-grandmother was in Krassnia too. And it's not a coincidence that my mother followed in her footsteps, kind of, in more ways than one. But we'll come to that later.)

Over the next few weeks, I kept a close eye and ear on everyone I knew at school. In my diary I noted every clique rumour or slighting remark, and every week went through them and added them to a table I drew up at the back of the book.

Nothing would have pleased me more than to be able to stand up and open my mouth like what's-her-name at the end of the *Invasion of the Body*

Snatchers remake and scream that one of my class enemies (so to speak) was an FSB agent. Sadly for me, the opportunity never came up. A month or two of this and it got boring, even for me. I found another hobby: role-playing games. In those days we played them around a table, with rule-books and score-sheets made from paper. (You don't believe me? Check Wikipedia.) I once honestly thought that the whole idea of Dark Britannia had come from a sort of mental mash-up of all the games I played back in my dice-rolling days.

4.

You're an orc [*strike that, we can't call them orcs. Keep those serial numbers filed off!*]. You're a breath-chokingly ugly, squat, heavysset, lightly armed barbarian warrior. Looking around, you see that you are in the front rank of a horde of likes-of-you, on a darkling plain. Shuddering at the sight of your comrades-in-arms, you turn away.

Facing you, across the darkling plain, is another ignorant army, but this one is made up of tall, flame-haired, handsome people whom we might as well call elves.

In the far distance, looming above the darkling plain, is a range of mountains. And looming above the range is a central peak, about whose summit a weird glow flickers. You don't have time to think about this, because you and the rest of your ugly ignorant army is striding forward, rank upon rank, then breaking into a charge, and within seconds you are mixing it with the beautiful people.

You manage to hack down an elf. You grab his glittering sword, so much better than yours, just in time to wield it against the next elf, who is bigger, faster, and angrier than the one you've just dispatched.

And whose sword is longer, sharper, and much more magical than the one you've just snatched up.

These things are sent to try you. It *builds character*. Character points give you a better start in your next life.

If you make it through this first battle (and in your first few lives, you probably won't, but you'll learn) you and the much-thinned but better-armed and somewhat less-repulsivelooking ranks of your comrades discover the

darkling plain is on closer inspection a richly varied landscape thickly bestrewn with forts, inns, ruins, towns, gullies, forests, marshes, cliffs; and inhabited by mysterious strangers, alluring wenches, rich merchants, false prophets; and absolutely swarming with Pictish [*strike*] tribal zombies and Roman [*strike*] [*stet*] Roman legionary revenants; all of whom provide obstacles and opportunities on the way to the central peak with the weird glow.

Along the way, your weapons, skills, magical abilities, and physical appearance improve with each success, until eventually you (or more likely, one of your so-called comrades and companions who has stolen a march on you) struggle to the summit of the central peak and plunge into the weird glow. Within it, there's a text floating in glowing magical letters, a whole goddamn grimoire of spells that you can use to confer power on you and your weapons. Brandishing a now even more magical sword, you (or your rival) emerge as the new king of the hill.

You turn and look back the way you have come.

Far away across the darkling plain, a vast horde of hideous barbarians is advancing like an incoming tide.

You and your companions march out to meet them.

5.

I had my elbows on the desk, my fingertips pushing up the skin between my orbits and my eyebrows (thus propping my eyelids open without smudging my eye shadow) and a coffee mug cooling to drinkability a little way to the right of the stack of pieces of paper I was busy putting off starting to work through. At 2 p.m. in the afternoon, a week or so after Amanda's late-night phone call from NYC, my lunch was trying to make me snooze.

Considering that my lunch had been three bait-sized mouthfuls of Tesco sushi and a dab of wasabi, this wasn't fair. It must have been the rice.

The guys, of course, had all had Cuppa Soups with Subway sandwiches as long and thick as their forearms, or something equally heavy like a good old Scotch meat pie, and were all rattling out code or documents on their keyboards and talking across each other.

They were talking so loud that Sean Garrett (the aforementioned PTB)

almost didn't hear the phone. I barely heard it myself, until an escalating irritation drove it to the top of the stack.

"Somebody answer the fucking phone!" I yelled.

That was clearly not specific enough.

"Sean, answer the fucking phone!"

Sean looked away from the screen, looked at the phone on his desk as if noticing it for the first time (which it could well have been, given that we did everything by mobile and hardly anyone had ever rung us on the official office phone, which wasn't even on my desk and I was the actual admin person), and picked up the receiver.

"Sean—uh, Digital Damage Productions," he said. He waved a hand behind his back, and the volume of conversation dropped. For a couple of minutes he was all "Uh-uh" and "Yes" and "Hmm." Then he swivelled his chair and looked at the rest of us.

"Lucy, is Krassnia that godforsaken place you were dragged up in?"

"Yes," I said.

"Can you speak the language?"

"More or less," I said. "Bit rusty, but I could get up to speed, I guess. Why?"

"Tell you in a minute. And is it true that your mum wrote the fucking book on Krassnian mythology?"

"Yeah," I said. "I have a copy."

"Brilliant!" said Sean. He returned to his phone conversation. After about five minutes he put the phone down, and spun the chair around again. This time he waved his fists in the air.

"Wah-hoo!" he said. "I've just had a fucking amazing offer."

. . . Which he then proceeded to outline, much along the lines of what Amanda had said to me. The ostensible client—the cut-out, as I thought of it—was itself a start-up, a Brussels-based company called Small Worlds that aimed to pitch adapted games to the niche market of small language groups. Whoever was on the other side of the phone hadn't tried to make it all seem like a fantastic coincidence—they'd claimed to have actually found me by trawling the agencies and Googling for anybody in the biz whose online CV showed a Krassnian connection, and to have known that I was the daughter of *Krassniad* author Amanda Stone—all easily accessible knowledge—which was why they'd tried Digital Damage first.

Even so, the guys were all giving me looks that mingled congratulation with puzzlement.

“Kind of a funny thing to be marketing,” said Matt, our best coder, looking away from a screen on which he’d just Googled. “Krassnia’s population is less than half a million.”

“That’s Small Worlds’ problem,” said Sean. “They’ll know what they’re doing.”

“All the same,” said Matt. “Sounds a bit dodgy.”

“Probably a CIA plot,” I said, in my best stab at an American accent. (Which sounds at best Irish. My normal accent is Scottish with a Russian—or is it Krassnian?—with Scottish and NYC overlays, which leaves people guessing which tiny Inner Hebridean island I come from.) The guys all laughed, and that particular question dropped off the agenda, unanswered.

The guys—let me introduce you to the guys. Sean, you’ve met. Stocky and chunky with a greasy sheen on his face and his long, lank black hair. He’s the entrepreneur, the man with the business plan. The business plan was complicated but the big idea, the Unique Selling Point, was very simple: online multiplayer games that would run fast on slow computers.

Suresh was Sean’s first partner. A slim, quiet Bengali guy with a heavy Glasgow accent. It was Suresh who came up with the algorithm that made Sean’s idea work. What it does is ruthlessly prioritise the use of the machine’s resources: it’ll sacrifice colour, rendering, detail, sound to keep the game running fast, and it does it seamlessly. In principle you could drop all the way back to stick figures with captions and word balloons, and the action would be just as fast as it is on the latest and shiniest game-optimised PC.

Joe’s the high-level design guy, and the low-level art guy. He came up with DD’s first game, Kronos. (That’s the one set in a space station abandoned by some Elder Race and full of rich pickings and nasty surprises.) He also came up with the second game, Olympus, the one that was getting really bogged down until I met Joe and Sean in the Auld Hoose (Edinburgh geek and goth hangout) and suggested they change it from astronauts-and-AIs to swords and sorcery. Which is why the physics engine of Dark Britannia is still called mars.exe. Joe tries to keep his blond hair and his stubble the same length, with indifferent results. He smokes on the fire escape a lot.

And Matt, like I said, is the best coder. (All of the above are coders as well

as all the other things I've said they do. Even I can be called on to code if necessary—though my actual work is all admin, in principle I'm just the worst coder, not a noncoder. That everyone should be a coder is a key component of Sean's business plan. He took it from *Starship Troopers*: "Everybody drops! Everybody fights!" One of his annoying little mantras.) Matt's the only one of the guys who's a real cutie. Tall, thin, with long fingers and short curly black hair. Very much attached, but we flirt. (Well, we used to, but you know what I mean.)

Joe was frowning.

"This won't work," he said. He waved a hand at the schedule highlighted on the calendar tacked to the office wall. "September release. Not enough time to run a sideline release in parallel."

"Yes, there is," said Suresh. "It's a bodge job, come on. Lucy just has to crack her mam's book and give you a few tips and tweaks."

"And translate the dialogue and internal prompts," I added.

"And do all the voices too?" Joe said.

"No, no," Sean said. "That's covered. Small Worlds has some contacts who'll take care of the voice acting. We send them the script, they can turn around the sound files within the week."

"What about the landscape?"

This was dangerous territory, for reasons I'll explain in a minute. I jumped in quickly.

"Not a problem, Krassnia's landscape is sort of uneven plain with a mountain range anyway. I'd just have to plug in place-names, maybe make some up. There might be one or two features that need changing, but nothing we can't finesse."

Joe shook his head. "I don't like it. We've got no slack as it is. Even if it was just the coding, there aren't enough hours in the day for us to do it."

"With twenty-five K in the bank," Sean said, "we can either all find some more hours and pay ourselves for them, or we can hire another coder." He shrugged. "Your call, folks."

I could see calculations going on behind people's eyes.

"And presumably we can all get a fat bonus out of the fifty thousand quid at the end," I said.

"I'll think about that," said Sean. "It would sure come in handy for our next project. But, well, maybe we could pay ourselves a bit of it. I'll have to see."

“We could think of the Krassnian version as a beta release,” I added. “Middle of June gives us time to iron out any bugs before we ship in September.”

Joe looked twitchy. A quick trip to the fire escape was in his near future.

“Look,” he said, “if Lucy can come back to me, ASA fucking P, with a schema that looks feasible . . .”

“We need to get back with an answer sooner than ASAP,” Sean said.

“How soon?” Joe asked.

“Day after tomorrow.”

They were all looking at me again.

“I’ll have a schema on Joe’s desktop, day after tomorrow, first thing,” I said.

They didn’t believe me. I reminded them I’d come up with the idea for the game in the first place, that I’d written the original outline, that I’d spent a lot of evenings walking through the game, and that I knew it backwards and forwards. And that I’d read the book years ago and would only need a short time to brush up on the details.

They still looked sceptical, as well they might. What I hadn’t told them was that I’d read the book not years but days ago, and that I had a very good reason for thinking that adapting the game to the book would be a doddle. I had a very good reason for not telling them that.

They agreed there was nothing to lose by trying. I should have felt elated. To my surprise, I felt scared.

Because from here on in, it wasn’t just speculative. I was involved. We all were. More to the point, I had involved my colleagues in the affairs of Krassnia and the intrigues of the CIA.

And it was because of what I’d found in the pages of the book, and what had fallen out from between those pages.

6.

What had fallen out of the book, when I leafed through it the night after the night Amanda called, was a photograph. A faded colour photograph, taken in early September 1990 and—by virtue of its subject—looking a lot older

than that. It showed a little girl clutching a big bouquet. The girl was wearing a brown dress with a white bib apron with shoulder frills, and on top of her head a big white multiple bow, like an origami lily in organza. Cute and sweet: the sort of look some Japanese girls pay good money for these days.

I was the little girl. The outfit was my Soviet school uniform. The bouquet was to be presented to my teacher on the first day of school. I was smiling in the photograph, but that was taken just before I'd burst into tears. I don't remember how my mother had cheered me up. I don't know either how my mother was able to get me into school two years younger than all the others. The next memory that comes to mind is of sitting in the front passenger seat of her old Moskvitch, trying to click the retrofitted seat belt while holding the oversized bouquet. My mother leaned over and helped. Then bumping along the unmetalled, potholed road from the apartment blocks to the primary school.

It was the playground, I think, that cheered me up. As I joined the queue of neatly uniformed seven-year-olds in front of the main entrance I eyed the slides and swings. They were painted pink and green and purple, and made of the kind of pipes you saw outside apartment blocks and factories, combined with painted carved log sculptures of the ugliest characters from my picture books.

Handing the bouquet to the teacher. Taking my place among the rows of wooden desks under a framed portrait of Lenin. The smells of carbolic and wee, of chalk dust and pencil sharpenings.

All my good memories of that classroom are overshadowed by the memory of the first really frightening day of my life. That came almost exactly a year later.

As for what I found *in* the pages of the book . . .

The evening after Amanda's call I got back to the flat about nine. My flatmates, Julie and Gail, had been and gone. They work nine to five, not eight to eight. I dumped the Tesco bag on the kitchen table, stabbed the plastic film over the Healthy Eating Mushroom Tagliatelli with a fork a few more times than I had to, and stuck the meal in the microwave. While waiting for the ping I ambled through to the living room and took *The Krassniad* down again from the shelf. Back in the kitchen, I put the book down on the table and set up a wine glass and wine box.

Ping.

I ate with the book in one hand and a fork or glass in the other, slugging Namaqua between bites. After I'd finished eating I skooshed a refill and kept on skimming the book.

Here's what I found.

Skip the begats and cut to the chase.

There's this guy, see, name of Duram. Strapping, handsome lad, in his teens when the story starts. Works the fields, minds the kine and swine, but he's not a serf. Oh no. Eldest son of a free farmer, Mordan, a respected local strong man, whose words carry weight at the moot. The Krassnar are typical barbarians: in other words, civilised. They settled like sediment out of a big current of migration that, centuries ago, helped to bring down the Roman Empire. They farm the plains. The fields of the free farmers are worked by their own families, as well as a variable number of churls, thralls, and serfs. The free farmers are exploiters all right, but they aren't the ruling class. Oh no.

Above the plains looms a mountain range, and in fastnesses of that range dwell the lords of the land, the Vrai, who take little interest in the Krassnar other than to exact tribute. The lordly mountain clans claim to be descendants of the Roman garrison. More probably, they are descended from some breakaway of the migration that slew the garrison, and acquired a little culture from its widows. They have just enough Roman blood to be arrogant, enough Roman learning to be decadent, enough Christianity to be intolerant, enough heathenry to conjure demons. They claim to hold the land of the Krassnar on behalf of Byzantium. Byzantium knows little of them, and cares less. An annual tribute of precious stones and metals—partly obtained by robbery of other tribute caravans, partly by mining in the mountains—trickles to Constantinople.

Duram grows up taking all this for granted until a Vrai lordling rides into the village with his retinue, carries off half the crop, and rapes Duram's sister, who later dies giving birth to the lordling's bastard. Duram, by this time, has worked himself up to swearing vengeance and gathering a gang of young ruffians around him, much to the dismay of his father. At his sister's death, Duram and his band set off for the mountains. Along the way they intend to recruit any malcontent and fight any Vrai they meet.

Cue a series of adventures and exploits which you'll know the general drift of from the tales of Samson, David, Arthur, William Wallace, and Robin Hood. I'm not sure how many of these parallels were in the original fragments, or whether my mother made them up. Anyway, after dealing by force and trickery with all kinds of opposition, treachery, magic, femmes fatale, spectral legions, Vrai spies, and all the rest, Duram and his by now much more formidable band march out across the plain just beneath the mountains to challenge the Vrai direct.

The Vrai ride out to meet them. . . .

It was when I'd reached this point in the story that the light came on.

Dark Britannia was already based on *The Krassniad*.

This wouldn't have been a surprise if I'd actually read the book, no matter how long ago, but I hadn't.

I put down the glass and started flipping back through the pages I'd skimmed. Incident after incident—the encounter at the inn, the alley of the magicians, the betrayal at the ford—suddenly seemed highlighted because they were all in the game. I could have kicked myself for not having noticed them earlier.

Then I started flipping forward.

Duram and his band—now a horde—indeed conquer the mountain fastnesses, using weapons—some of them magical—that they have taken from fallen Vrai. Inside one of the fastnesses, Duram finds a cave. Within that cave, he finds the secret of the power of the Vrai: an inscription that confers magical power on weapons and people exposed to it. The descriptions are contradictory, but there's no doubt that weapons exposed to the magic are sources of power. Whoever holds them, holds the land. Whoever wields them wins his battles—unless, of course, overwhelmed by sheer force of numbers, he loses them in battle and they pass to the enemy, as has indeed just come to pass.

As soon as Duram and his most trusted comrades have proclaimed their rule, they face an uprising of folk who—now they come to think of it—prefer the Vrai, almost literally the devil they know—backed by barbarians from outside the domain, who've taken advantage of the civil strife to press in upon the land from the plains to the east. Duram's men ride out to meet them. . . .

Battle is joined, a welter of valorous deeds and slain foes. Just not *enough* slain foes. Duram and his men perish gloriously.

And there the story ends.

There is, of course, a coda. There always is. This is the usual once-and-future king deal, whereby Prophecy tells that some day another liberator (perhaps, or perhaps not, a descendant of Duram) will arise and free the Krassnar.

So much for the legend.

The book's sombre afterword outlined what actually happened.

In history, the Vrai were restored and Duram's men slaughtered. The Krassnar, after a massacre of the rebels, settled down in sullen acquiescence. The Vrai were much weakened politically but increased in population, and eventually in 1887 the whole little country was rescued—as the official legend still has it—from the Ottoman Empire by the Russian Empire. The peasants went on as before. A small proletariat developed around a British-owned copper mine. The Vrai became part of the Russian aristocracy. This wasn't like a Western aristocracy: nobility was a rank in the civil service. A scion of that nobility was one Avram Arbatov, born 1894, executed 1937: the Bolshevik ethnologist who compiled the tales that became the legend recounted in this book, and to whose memory my mother had dedicated it.

There was something missing from that dedication, but I knew just why my mother had not seen fit to mention a rather significant fact—or at any rate significant possibility—about Avram Arbatov. There were family feelings to consider.

I put the book down and took a big gulp of red wine. I felt so creeped out that I actually looked over my shoulder. Nothing there but the cat. I took a couple of deep breaths, invited the cat to my lap, and sat hugging him for a minute. The cat did his creepy thing of suddenly staring over my shoulder at a point in the air where I (looking over my shoulder again) could see nothing. I picked up the book again and fanned its pages.

That was when the old photo fell out, onto the table. I stared at it for a moment, bewildered. Then I recognised myself, and everything came back. I remembered where the story and the incidents within it had come from.

They'd been my bedtime stories.

Amanda had told me them, starting when I was the little girl in the pic-

ture. I hadn't remembered them, but they must have remained in my subconscious, because they had come out when—two years earlier, in the pub with Sean and Joe—I'd outlined the scenario for Dark Britannia.

And the magic mountain—in the game and in the legend—really existed, and really was mysterious and forbidden territory. You could see it on the horizon from Krasnod, white-peaked, high above the shimmering haze from the plastics factory and the dust from the mine. Even before I'd clicked to the connection between the game and the book, I'd always mentally pictured the mountain in the game as Mount Krasny (known from 1927 to 1936 as Mount Kuibishev, then as Mount Yezhov, then as Mount Krasny again). And I knew the tales about Mount Krasny, oh yes.

They'd been my daytime stories.

Daytime stories: when I was too young to go to school and my mother was at work, I was looked after by Nana. She wasn't really my Nana, I knew that because my mom had shown me photos of my real Nana, a pretty lady called Gillian who lived in a huge house with a car and a fridge and a dog and lots and lots of rooms with pictures on the walls. But I'd never met Nana Gillian, and I met Nana Krassnia every day. So the latter was Nana. She wore an overcoat and a kerchief and rubber boots, summer and winter, indoors and out. At least, that's how I remember her.

Nana took me to the park every day. She took me to wait in line with her at the shops. I trailed around after her while she cleaned and tidied the flat. (She didn't *have* to do that, she kept telling me. She just couldn't stand the mess that "that mother of yours" had left it in.) She let me help her while she peeled potatoes for dinner.

From her I learned that things were going out of the world. They had started going out of the world around about the time I was born. The time I was born was called *Before*. Before, we had this, Nana would say. Before, we had that. I came to the conclusion that I was one of the last things that had been made, and that I was very lucky to have been made at all. Any later and it would have been After, and that would have been too late for me.

None of this really bothered me. I took it quite for granted that one by one things disappeared from the world or stopped working, like cars, or elevators, and no new things came along to replace them.

One winter morning the sky was very clear above Krasnod—the plastics factory had stopped working—and I saw, in front of the ragged, looming range of the Caucasus mountains, the peak of Mount Krasny shining white above the rooftops in the blue sky.

“Nana,” I said, as she tugged me along the sidewalk, which was all nice and frozen so your feet didn’t squelch in it and it wasn’t smelly, “I want to go to Mount Krasny!”

“We can’t,” she said.

“Why not?” I said.

“Nobody goes to Mount Krasny.”

“Why not?” I said.

Nana was patient. “Because it’s a Zone,” she said.

A new word!

“What’s a Zone?”

“A place where people can’t go,” she said.

Even at that age—four?—I knew a circular argument when I heard one.

“But why can’t they go?”

“I’ll tell you when we get to the park,” said Nana.

And of course when we got to the park I ran to the swings and climbing frame and forgot all about it until a while later when by chance I glimpsed the mountaintop again.

Nana was sitting on a bench at a wooden table with three other *babushkas*. They all had coats and kerchiefs and string shopping bags, and were keeping half an eye on other little kids running about. They all looked at me as I ran up.

“Nana,” I said, “you said you’d tell me why people can’t go to a Zone.”

I remember what happened next quite vividly, because it was the first time I’d seen anything like it. All four grandmothers looked over their shoulders at the same time. Then the other three all turned to Nana and looked severe.

“It’s all right,” Nana told them, waving her hand dismissively.

She turned back to me. “Listen, dear,” she said. “It’s dangerous to go to a Zone, that’s all. And it’s best not to talk about it.” She opened her arms and took me to her lap. She whispered in my ear: “I’ll tell you stories when we go home, dear. Now run along and play with Ivanova.”

Nana kept her promise. She told me strange and terrible tales: of people who had ventured to the slopes of Mount Krasny and returned with *two beads*; of an ancient knight who had sought the last resting place of St. John, and found the Devil's daughter; of kine that had strayed on the slopes and ever after had given blood instead of milk; of the haughty, lordly, flame-haired Vrai, the only folk who could enter the mountain's labyrinth of crevices and return unharmed, or indeed enriched; of the peculiar four-winged lizards that haunted the mountain's forested foothills; and, quite in the same tone and manner as she recounted all the rest, of that time in her own youth when "that wicked man Beria, the Mingrellian with cruel eyes" had been seen in town, and the mountain's side had glowed for seven nights.

I could understand why my schema for the game had unconsciously echoed the book and the tales from which it sprang.

That correspondence still creeped me out. It felt like destiny.

I already had a bad opinion of destiny. Here's why.