

The R3F
Review of Books
Incorporating Prose Bono
Professor George Phillipies, D.Sc., Editor
February, 2026

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Editorial

The N3F Review of Books Incorporating Prose Bono has always functioned as an aggregator. All across the net are large numbers places that publish reviews of science fiction books. We collected them, regardless of the philosophical tastes of the reviewers, and published them all in one place.

Matters have suddenly become extremely unfortunate. For unclear reasons, Declan Finn as Editor of Upstream Reviews revoked our permission to reprint from Upstream Reviews. That web site was our largest single source of reviews. We did approach the actual owner of Upstream Reviews, who was very polite but unable to help us.

We will try various approaches to generating more reviews, but I can make no promises. If you happen to know any of the people who write for Upstream Reviews, please indicate that we would be delighted to receive their reviews directly.

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Fiction

After World by Debbie Urbanski

Review by Cory Doctorow of pluralistic.net

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Debbie Urbanski's debut novel *After World* is an unflinching and relentlessly bleak tale of humanity's mass extinction, shot through with pathos and veined with seams of tragic tenderness and care:

I first encountered Urbanski in "An Incomplete Timeline of What We Tried," an experimental short story on Motherboard's brilliant Terraform science fiction portal:

"Incomplete Timeline" is a list of climate remediation steps "working back from human extinction," like "increased military fortification of national, provincial, and state borders," "the founding of several utopias," and "redefine the word wilderness."

These items begin with a climax, or perhaps an anticlimax: "The coordinated release of various strains of a human sterilization virus."

This is the jumping off point for *After World*, which expands this final item to the action of a wrenching tale whose backstory is the list's remainder. Sen Anon – the story's semi-protagonist – is 18 years old when the world learns that every person alive has been sterilized and so the human race is living out its last years.

The news triggers a manic insistence that this is a good thing – long overdue, in fact – and the perfect opportunity to scan every person alive for eventual reincarnation as virtual humans in an Edenic cloud metaverse called Gaia. That way, people can continue to live their lives without the haunting knowledge that everything they do makes the planet worse for every other living thing, and each other. Here, finally, is the resolution to the paradox of humanity: our desire to do good, and our inevitable failure on that score.

And so the Earth is converted to a place of mass suicides, as people gurn and mug while boarding airplanes filled with explosives so they can go out in a literal blaze of glory. The food will run out soon, and the government makes sure everyone has a suicide pill for the day when the hunger grows too intense. Not everyone is lucky enough to get on one of the suicide flights, and, being eager to see themselves off before they harm the planet further, just hang themselves in the garage or jump off a roof. They are counted as heroes, but also nuisances, because disposing of the bodies is a lot of work.

But some people – young people – are given a mission to live on for as long as possible. These are the observer/recorders who are charged to spend the last days of the species closely watching the return of the natural world, the seeing off of humanity, and to write it all down in longhand in a succession of notebooks that are taken away by drones. This is part of the story humanity cooks up for itself about extinction being a noble choice, rather than a chaotic act born of desperation.

Sen Anon is one of these observers, and her mothers take her to a remote cabin to live out (and observe) the last of humanity's days, ensuring she is settled in and then killing themselves. After all, without them, Sen Anon's limited food supply – meagerly supplemented by drones in proportion to the

quality of the observations in her notebooks – will stretch further.

Much of the novel takes the form of Sen Anon's notebook observations, countersunk with an omniscient third-person narrator who is revealed to be [storyworker] ad39-393a-7fbc, a software agent involved in the project to recreate all those dead humans in the Gaia metaverse.

[storyworker] ad39-393a-7fbc is a very unreliable narrator, who reprograms itself through the course of the story, all the while muttering asides to itself about the theoretical basis for telling Sen's story this way. [storyworker] ad39-393a-7fbc struggles with a supervisory AI that has been charged with overseeing all the [storyworkers], but which can't – or won't – rein in [storyworker] ad39-393a-7fbc as [storyworker] ad39-393a-7fbc grows more involved in Sen's life.

This experimental storytelling style (supplemented by found texts from humanity's dying, like a glossary of terms to be retired and new terms being created by a linguist who is starving to death as they complete their task) creates a contradictory narrative distance and closeness.

It's a curiously flawed omniscience that's allows Urbanski to capture the yawning, bottomless horror of the climate emergency of today and on the horizon. I don't think I've ever experienced the kind of sustained, deepening existential dread that After World created, chapter by chapter.

To sharpen this, Sen's mothers – scientists who were given exceptions to the no-child policy because their work was deemed essential to the now-abandoned project of saving humanity – are grimly supportive of the mass suicide project. When Sen's own horror creeps up on her, her mothers are sharp and often unkind, with only the smallest flashes of love and sorrow for their daughter escaping their facades, all the more vivid for their rarity.

In contrast, [storyworker] ad39-393a-7fbc grows ever more sympathetic to Sen and the rest of vanished humanity. [storyworker] ad39-393a-7fbc is a very convincing alien with motives and perspectives that are profoundly nonhuman, and yet, the compassion and love are unmistakable.

Of After World's two protagonists, [storyworker] ad39-393a-7fbc might be the more relatable. It takes an alien point of view to truly see humanity's flawed glory, irredeemable and irreplaceable. If you reveled in the nonhuman umwelts on display in Laura Jean McKay's 2020 debut *The Animals In That Country*, [storyworker] ad39-393a-7fbc will stretch your brain and imagination in similar ways:

After World is a book that goes hard. Pitiless, merciless and relentless, it takes you to the darkest depths of climate despair and reveals the indestructible beauty at our species' core.

Bowl of Red by Sarah Hoyt
Review by Jim McCoy
Jimbossffreviews.substack.com

Every once in awhile it occurs to me that, despite the fact that I get elebenty bajillion newsletters via both Substack and other places, I don't read enough of the stuff that I should. I say that because I've been waiting for Sarah Hoyt to release the fourth book in her Shifter series, entitled *Bowl of Red*, since what seems like the day before England's Glorious Revolution kicked off, even if my logical side says it's been less than half that long, but she released it over three years ago and I didn't realize it till a couple of weeks ago. I'm sure she mentioned something about it on her blog but I err...

Haven't been reading it as much as I used to. That's a bad move on my part too, because it's a good blog full of facts, opinions, and fun.

Of course, it was only common sense and propriety that kept Hoyt from getting in her car and driving hundreds of miles to my house to place a copy of Bowl of Red in my hand. I'm not sure that's a good excuse though, as I've never allowed common sense or propriety to stop me from doing anything I wanted to. And, let's face, an ego as large as mine needs to be stroked every so often. Still and all though, I stumbled across the book in my Kindle recommendations and picked it up. I'm glad I did, too.

Of course, I've already read the first three books. That was so long ago that I was still reading things in Dead Tree Format (better known as paper). They were awesome and they tie in with Hoyt's work as Elise Hyatt, where she writes cozy mysteries. Those are good books too. It just occurred to me to wonder whether I should be checking to see if she's released any more of those too.

But about the book I'm actually reviewing:

Bowl of Red was worth the wait, even if I didn't have to wait as long as I did. Seriously reading a book like this is like having a couple of old friends over for coffee. It's low key. It doesn't last long enough. But, still and all, it's a good time and it's one that you hope to repeat soon.

There is a lot going on in Bowl of Red. Hoyt has done an amazing job of gradually expanding the world of the story while leaving her main characters in Goldport. Once upon a time I thought that there were very few shifters in Hoyt's Shifter universe. And I guess they still are a vanishingly small percentage of the world's population. The fact remains that a vanishingly small percentage of eight billion is a whole bunch. There are a lot of shifters in a small town in Colorado right now and it would appear that something big is coming.

No, I'm not going to tell you what that something is. I don't do spoilers except when I do but now is not one of those times. You're really going to need to read the book to find out what the big thing is. And it's totally worth it BUT:

Bowl of Red is the fourth book in a series. Hoyt's The Shifter Series really, really needs to be read in order. That doesn't mean I'm telling you not to read BoR. It does mean that I think you should read the first three books first. They're every bit as good. As a matter of fact, it was the first time that I read Draw One in the Dark, the first book in the series, that I became a fan of Sarah Hoyt. The other books in the series, Gentleman Takes a Chance and Noah's Boy are really good too. It's not a very long series yet (looks at Hoyt in "More, please") although there is also a fifth book that I just found out about.

I'll be reading that soon.

The fact remains that every book of The Shifter Series after the first builds on what came before. This is not a series built of standalone novels. If you want to understand what you're reading you need to know what has happened already. That's the only way this works. Trust me on this one. Don't end up like pre-teen Jimbo, buying the sixth book in a series and then having to go back in the series to find out what happened previously. That sucks.

There is something about an author that writes family well. Not all of them do. Families aren't always happy and peaceful. I loved the family in ST:VOY episode "Real Life" but they weren't realistic. Hoyt has a gift for writing families and making them work. The only other author I've seen that can do them

as well as Hoyt would be DT Read and I'm a huge fan of hers as well. They way the related people in Bowl of Red related to each other made sense in a real world sort of way. These people aren't the Cleavers, but they're not the Simpsons either.

Oh, and I loved the reverse Loki reference, but that's all I have to say about that.

Except maybe I'll mention that I'm not sure it was intended that way. Then again, what do I know? I just work here.

While Bowl of Red largely ignores real world politics, Hoyt sets up a pretty amazing political world for the shifters in her The Shifters Series. There is a lot going on here with the way the various species of shifters relate to each other and how they interact in their own individual factions. It's something I had never given a thought to, but Hoyt obviously has.

All in all, I'm really glad I found out that Bowl of Red was finally here, even if finally was actually three years ago. Tom and Kyrie (the main characters of the book, shifters of the dragon and cat varieties respectively) need to stop by more often. And now, I'm off to download the next one.

Bottom Line: 5.0 out of 5 Exploding Fryers
Bowl of Red

Cahokia Jazz by Francis Spufford
Review by Cory Doctorow of pluralistic.net
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Francis Spufford's Cahokia Jazz is a fucking banger: it's a taut, unguessable whuddunit, painted in ultrablack noir, set in an alternate Jazz Age in a world where indigenous people never ceded most the west to the USA. It's got gorgeously described jazz music, a richly realized modern indigenous society, and a spectacular romance. It's amazing.

Cahokia is the capital city of Deseret, a majority Catholic, majority indigenous state at the western frontier of the USA. It swirls with industry, wealth, and racial politics, serving as both a refuge from Jim Crow and a hive of Klan activity. Joe Barrow is new in town, a veteran who survived the trenches of WWI and moved to Cahokia with his army buddy, Phineas Drummond, where they both quickly rose through the police ranks to become detectives.

We meet Joe and Phin on a frigid government building rooftop in the predawn night, attending a grisly murder. Someone has laid out a man across a skylight, cut his throat, split his chest open, and excised his heart. This Aztec-inspired killing points at Cahokian indigenous independence gangs, some of whom embrace an apocryphal tale of being descended from Mesoamerican conquerors in the distant past. That makes this more than a mere ugly killing – it's a political flashpoint.

The Klan insists that Cahokia's system of communal land ownership is a form of communism (Russia never ceded Alaska in this world, so the USSR is now extending tendrils across the Bering Strait). They also insist that Cahokians' reverence for the Sun and the Moon – indigenous royals who have formally ceded power to elected leaders – makes them a threat to democracy. Finally, the Cahokians' fusion of Catholicism with traditional faith makes them spiritually suspect. A rooftop blood-sacrifice could cause simmering political tension to boil over, and for every white oligarch drooling at the thought of enclosing the shared land of Deseret, there are a thousand useful idiots in white hoods.

Joe and Phin now have to solve the murder – before the city explodes. But Phin seems more interested in pinning the case on an Indian – any Indian – than he is on solving the murder. And Joe – an indigent orphan who has neither the language nor the culture that the Cahokians expect him to have – is reappraising his long habit of deferring to Phin.

This is the setup for a delicious whodunnit with a large helping of what if...? but Spufford doesn't stop there. Joe, you see, is a jazz pianist, and his old bandmates are back in town, and one thing leads to another and before you know it, he's sitting in with them at a speakeasy. This gives Spufford a chance to roll out some of the most evocative, delicious descriptions of jazz since Doctorow's *Ragtime* (Penguin-Random House.).

It's not just the jazz. This is a book that fires on every cylinder: there's brilliant melee (and a major battle set-piece that's stunning), a love storyline, gunplay, and a murder mystery that kept me guessing right to the end. There's fakeouts and comeuppances, bravery and treachery, and above all, a sense of possibility.

Most of what I know about Cahokia – and the giant mounds it left behind near St Louis – I learned from David Graeber and David Wengrow's brilliant work of heterodox history, *The Dawn of Everything*.

Graeber and Wengrow's project is to make us reassess the blank spaces in our historical record, the ways of living that we have merely guessed at, based on fragments and suppositions. They point out that these inferences are vastly underdetermined, and that there are many other guesses that fit the facts equally well, or even better. This is a powerful message, one that insists that history – and thus the future – is contingent and up for grabs. We don't have to live the way we do, and we haven't always lived this way. We might live differently in the future.

In evoking a teeming, indigenous metropolis, conjured out of minor historical divergences, Spufford follows Graeber and Wengrow in cracking apart inevitability and letting all the captive possibility flow out. The fact that he does this in a first rate novel makes the accomplishment doubly impressive – and enjoyable.

Empire Star by Samuel R. Delany Review by Thomas E. Simmons

Empire Star (1966) is possibly the best sci-fi novel I have ever read. It is brilliant. I am bashful to admit that it's the first Samuel Delany novel I've read, so I may need to adjust that assessment (especially insofar as *Empire Star* is seldom mentioned as one of his best novels) since I intend (gleefully) to tackle more of his fiction.

It's a doozy, *Empire Star* is. It's such an excellent read that I am more than typically reticent to give away anything – even if not technically a 'spoiler' – which might diminish a new reader's wonder-of-discovery. Accordingly, this review will only outline the basic premise and provide a single example of Delany's brilliance without further divulging any plot developments.

Here's the premise: Our protagonist is a teenager named 'Comet' Jo and our narrator is a tritovian named Jewel. (Jewels, it seems, recur in Delaney novels about as frequently as bears in John Irving novels.) Jo has lived a simple (or "simplex") life on Rhys – a satellite of a gas giant planet orbiting Tau Ceti (the closest solitary G-class star to our system, just twelve light years' away).

Jo has had an isolated, rural, blue-collar sort of life until a spacecraft crash lands. Four beings were aboard: Norn, Ki, Marbika, and Jewel, but their ship encountered dangers – “the emptier space of the Home Spiral” where “there was nothing for the encysting mechanism to catalyze against.”

The ship loses its crust and crashes into Rhys at Jo’s feet. Two survivors emerge: Jewel, along with Norn, who petitions Jo to bring a message to Empire Star before perishing. As Jo examines the wreckage, he spots Jewel. Jewel crystalized before impact, constraining her communications, but retaining her quasi-omniscient perceptions (making Jewel an ideal narrator). So, Jewel narrates:

“Jo looked down. The thing was multicolored, multifaceted, multiplexed, and me. I’m Jewel.”

Jo takes up the challenge and embarks on a coming-of-age road trip across one corner of the galaxy, bound for Empire Star where he will deliver a message (unsure of its content). (That’s what it feels like to be a teenager, most of the time; you’re on a path but you don’t know much else about the destination.) Jewel accompanies Jo but only occasionally introduces itself into the narrative.

Such is a summary of the novel’s premise. And here is an example of Delany’s brilliance: About two-thirds of the way through the short, helical book, Jewel begins to intrude into the story more conspicuously. In chapter nine, Lump (a computer, mostly) suggests that Jo asks questions of Jewel in order to ascertain more about his mission and his message.

Jo is receptive to the suggestion. He asks Jewel: “Why will I join the Empire Army and serve Prince Nactor?”

This is the first the reader has heard anything of either any “Empire Army” or of a “Prince Nactor.”

Jewel answers Jo, “Because the army is going your way.” Then Jewel explains to the reader that just before this:

“The radio had come blaring on, and Prince Nactor’s voice had announced that all humans in the area were up for immediate conscription, to which Lump had said, ‘I guess that takes care of your problem.’ So there’s nothing mysterious about Joe’s question at all. I want to stress, for those who have followed the argument to this point, that multiplexity is perfectly within the laws of logic. I left the incident out because I thought it was distracting and assumed it was perfectly deductible from Jo’s question what had happened, sure that the multiplex reader would supply it for himself. I have done this several times throughout the story.”

Wow. Jewel’s exposition suggests that a linear narrative is not necessarily in the cards. And Jewel delivers on that hint in the pages which follow. The reader is empowered to engage with the narrative as a mature, intelligent, multiplexed thinker. Few authors trust their readers to this degree.

Were a novel to receive not stars but ‘wonder-wow’s’ in a rating system, Empire Star would warrant five and a half wows. Delaney never talks down to his audience, his prose is straightforward and his assertions are plain, but he also expects a lot of his readers. Are you – like Comet Jo – up for the challenge?

Wow. Wow. Wow. Wow. Wow. Wo—

town with nothing much to recommend it other than a rumor mill that runs at five times the speed of light and a tight knit group of people who look out for each other. It seems pretty low key at first. But then things get moving and the rest of the world starts to intrude.

I like the magic system in The Glyphwright Chronicles as well. Fabiano has imagined a system where glyphs can be used to provide a host of effects, some of which are on par with modern technology. His explanation of magic as a force and not just an action is pretty awesome. I am, quite frankly, a bit jealous of the man. I have a Scribe in my current work in progress and his system of doing things isn't half this entertaining. I suppose I should get over myself though. There is some spellcasting as well, but that's not the main focus of the book. Marcus is not a spellslinger.

True to the title of the series, Marcus starts out as an apprentice Glyphwright. That's a skilled trade that specializes in the creation of magical glyphs. He has a lot to learn when he's first starting out, but he's a good student. He does have a tendency to read ahead when he's not supposed to, and he's a bit precocious in some ways, but he doesn't hold back from learning. I like this kid. He reminds me of a young Jimbo in chemistry class, always learning and sometimes doing things he shouldn't but never meaning harm.

And listen, I may have melted that beaker but it had it comin'.

Or sumfin'

Of course, his experiments lead to an intervention by the Glyphwright's Guild (and didn't my little historian heart thrill at seeing that part of Medieval/Renaissance life accurately presented) who then have to stick their nose in to make sure the young guy doesn't upset the apple cart. The joke's on the Guild though. I was rooting for the kid. It's a fact of life that helping to clean up after the apple cart has been upset is a good way to end up with a tasty, yet healthy, snack later.

Okay, so we're pushing it with the analogies today. Just work with me.

What emerges is the story of a kid (Marcus) who just won't give up. I admire this dude. He works his tail off, but he doesn't get discouraged. He has this indomitable spirit about him. He doesn't have that superhero unstoppable quality, but he doesn't seem to understand that he lacks it. Marcus isn't the guy you want with you when you need an unstoppable juggernaut. He's the guy you want with you when nothing is going right and you need that guy who won't quit.

And I'm excited, because there are at least two more books coming in The Glyphwright Chronicles and I'll be reading them. I can't wait.

Bottom Line: 5.0 out of 5 Ward Anchors

Level One and Level Two Galactic Merc by Chris Kennedy
Review by Jim McCoy
Jimbossffreviews.substack.com

It has been a long time since I read two books in what basically amounts to a twenty-four-hour period stretched across two calendar days. Well, it had been anyway. Because when I picked up Chris Kennedy's Level One Galactic Merc Book One) I was hooked from basically page one. I couldn't put the damn thing down. And then I remembered that the sequel had been released (which was totally how it

happened. I totally never downloaded Level Two before I got Level One because I clicked on the wrong link. I'm clearly better than that.) so that I needed to read that, too. Fortunately for my ability to do things eat, sleep, bathe, work, drive, etc., the third one isn't out yet. For the record that's not my fault.

And there's a good reason that I spent leafing through pages madly. It's only mildly related to my reading addiction and love for LitRPG. Probably. We all know that I love Kennedy's work. Well, I do and so do both of my fans, anyway. I wasn't exactly surprised to find out that Level One and Level Two were good books. I was, however, surprised to find out how good they were. I was being serious when I said that I went through the two books in basically a twenty-four-hour period (It may have been anywhere from like twenty-two to twenty-seven or so hours. I didn't write down my start and stop times for posterity.) starting on Tuesday and ending on Wednesday. I haven't gone off on a binge like that since probably high school. (For the record, I'll be fifty in December.) It was nuts.

The thing is, the world of Galactic Merc is really easy to get drawn into. Jack Taylor, our feckless hero, starts off as a more or less regular human being from planet Earth in the year of right around 2025. That's for romance writer levels of normal, anyway. Then one night there are bright lights, gray aliens...

You get the idea. If you don't, ask your conspiracy theorist neighbor.

At any rate, he is saved from the aliens who kidnapped him by other aliens who work for a mercenary company and we're off and running. That is, the reader is off and running. Poor Jack seems to be a bit nonplussed at first, but I guess that's to be expected. I might be a wee bit confused if I all of a sudden found myself in a situation where I was the only human in a society full of alien species.

It turns out that there are statistics and levels that rule Jack's life now too. It's the kind of thing that any fan of LitRPG would instantly recognize, but apparently poor Jack didn't read enough LitRPG because he finds it all a bit confusing. There are several types of technology that he finds himself unfamiliar with, but this is a good thing for readers of the book.

If you read LitRPG then you already get this, but if not it's worth noting that every LitRPG has leveling systems and statistics and gear and...

You get the idea.

The key here is to remember that it works differently in every different LitRPG universe. Jack's lack of knowledge and need to ask about everything in his radius is not only entertaining, it's informative. Kennedy can teach us all how his Galactic Merc universe works by having Jack's companions explain things to him. It's a technique that gives us information as we need it and avoids boring infodumps.

And that's a good thing because there is a lot of action here. Kennedy keeps it cooking with grease. The job of a mercenary company is, of course, to engage in combat, and there is a lot of fighting in both Level One and Level Two. Not only is that the kind of thing that any fan would expect of both LitRPG and pretty much anything Kennedy has ever written, but it shows Jack's growth as he gains skills, knowledge and experience. He learns what to do when bad things happen and he actually manages to do them sometimes.

Seriously, Mr. Taylor manages to find ways through some seriously Jacked up situations. He doesn't give up ever. It's just not his thing. "Plucky" doesn't do Jack justice. He doesn't have the same skills,

but a lot of what I see in Jack reminds me of non-fiction I've read about guys in the Army Rangers or Navy SEALs. He's the guy who makes it through not because he's a superior physical specimen, especially at first, but because he just won't quit. I admire this guy.

One of the things I really enjoyed about both Level One and Level Two is that they are Science Fiction LitRPG. I haven't seen a whole lot of that. Most LitRPG is fantasy based. That's not a bad thing. I love fantasy literature. I read fantasy literature. I write fantasy literature. But it's a nice break from the norm to read something that's more spacefaring and technology based every once in awhile. SF was what got me started on the whole Speculative Fiction thing. I was a Trek/Wars before I was a fan of anything else and I always enjoy a return to my roots.

Jack's comrades aren't always the nicest people. They have a bit of a tendency to play pranks on him. It's pretty epic actually. I love that about both Level One and Level Two. Humor is something that I use in my daily life just to cope with whatever. The characters in the Galactic Merc series have a lot more stress than I do, so it's natural that they'd need an outlet and the new guy seems to be it. I laughed along with them and Jack is a good sport.

The really good news is that there are five Galactic Merc novels either available now or with release dates listed on Amazon. There is plenty of story coming and Kennedy has a history of putting out content quickly, so I wouldn't be surprised if there is even more after that. Jack has big goals and I'm guessing it's going to take him more than five books to get there. I'll be waiting with baited breath.

Bottom Line: 5.0 out of 5 Lost n00bs

No Man's Land: Chronicles of Lost Elly Vol. 1-3, by Sarah A. Hoyt Book Review by Becky Jones <http://ornerydragon.com/>

No Man's Land is a book almost 50 years in the making. Sarah Hoyt came up with the idea for this book when she was 14 years old. As she tells it, she came up with the idea after reading Ursula LeGuin's *Left Hand of Darkness* and thought she could do better. Now, 48 years later, she picked up where she left off, and the result is *No Man's Land*, a book in three volumes. Some might complain that this book doesn't fit neatly into any of the genre categories we all claim to adhere to. But I'm finding more and more lately that there are a number of authors whose work does not fit into any one specific category. And that's okay. When done well, mixing genres gives characters a few more hurdles to jump and problems to figure out. The genre mixing is done very well here.

The question here might be, when is a book (or books in this case) science fiction and when is it fantasy? In the case of *No Man's Land*, the answer is why can't it be both? *No Man's Land*, which is available on Amazon and Kindle Unlimited, is set in a world where magic exists alongside high technology and pure mathematics. Elly is a barbarian, pre-industrial world filled with magicians and magic, and at the same time, Elly is at war with another planet which also has a population filled with magicians. So, fantasy and magic combined with inter-planetary war. It's genre mixing at its best!

As with Hoyt's other books, politics – local, galactic, species-based, personal, vindictive – also plays a big role in moving the story forward; the egos, arrogance, predilections, and money, loads and loads of money, of some of those who hold positions of power drives them to evil actions in pursuit of power and twisted personal goals. The arrogance of “knowing better” than everybody else drives actions that have unexpected consequences far, far into the future.

Elly is a lost colony, one of many rediscovered as humans spread out among the stars. The founders of Elly thought they could create a race of humans who were equal in all things, including gender, and genetically engineered hermaphrodites who have super-computing abilities built into their very genetic material. This proved to be a catastrophic move for the future of Elly. No, the inhabitants of Elly are not cyborgs or anything like that, they're just your garden variety hermaphrodites divided into tribes based on lineage and location, who use mathematical formulas as spells and work magic. No problems, there, right?

Our story starts with Publius Cornelius Scipio Africanus Kayel Hayden, Viscount Webson, Envoy of the Star Empire, who has been sent to the planet, Draksah, to discuss its entry into the Star Empire as a protectorate (see there's the science fiction bit). In the midst of his first solo diplomatic mission, Skip, as he's known to his friends, finds himself pulled through a rift between worlds and falls out a window into Elly and into a complex political, diplomatic, and social situation so far above his pay grade he can't even see it. Once in Elly, Skip finds himself in a race against assassins, spies, and time to try to save Elly from those within and without who would destroy the planet and enslave its people for their own gain. Just another day in the Star Empire's diplomatic corps.

One of the things I really liked about this story is that it isn't just the main characters who find growth and come to accept change in their lives. Everyone we, the readers, get to interact with have those "aha!" moments and learn from them. There are seemingly big decisions which have smaller than expected consequences and small decisions which have consequences well beyond expectations. There are newly discovered and rediscovered connections between people, technology, and magic.

The pacing is a good blend of screaming action, quiet downtime, and sort of middling action (information discovery, that sort of thing). All the characters, even the more minor ones, are fully realized and brought to life. (I guess having almost 50 years to let plot points and characters marinate pays off!) Once I started reading, I had a very difficult time putting these volumes down.

There are several more books planned in the series for a total of seven, and I am very much looking forward to the rest of them. Sarah once said to a group of us that if you have stories in your head, you should get them out of your head and into the world before you leave this world. It may be that nobody reads your story, but at least it's out there in the wild and not gone forever with you. No Man's Land is one of those stories for her and I am very glad she yanked it out of her head and let the rest of us visit Elly.

Serpent Sword by Matthew W. Quinn
Review by Chris Nuttall
<http://ChrisHanger.wordpress.com>

Regular readers will recall that, back in 2020, I published a review of Matthew W. Quinn's *Battle for the Wastelands*, a story that managed to combine a number of genres from post-apocalypse nightmares to steampunk and even mild fantasy. The book had two threads running through it: the battle against the warlord Grendel and his allies, and Grendel's own attempts to turn a patchwork state into something more permanent. *Serpent Sword* is the sequel, in which the inconclusive skirmishing of the previous book is replaced by something more serious as Grendel himself takes the field against his enemies.

On one hand, the action is straight military fantasy very reminiscent of the Wild West. The combat very much fits that time period, although the use of zeppelins gives it more of a steampunk air. On the other,

the book delves deeper into the politics of holding together a state that is very fragile and quite likely to come apart if the warlord dies or suffers a devastating defeat. Grendel has forged alliances with many lesser warlords who are often hindrances as much as they are helps – and who will turn on him in a moment if they see weakness. This problem is made worse by Grendel’s harem of women and his brood of children, all of whom – technically – may be able to take his place when he dies, pushed forward by their mothers who assume they and their children will be murdered by the designated successor if their child doesn’t become the next warlord. Indeed, some of his wives have no loyalty to him and are even actively working against him.

Grendel is very aware of this problem, unlike many fictional or indeed historical warlords. He is doing what he can to keep the peace within his empire, balancing the power blocs while naming one of his children the primary heir. This threatens to bite him, later in the story, when he finds himself in deep trouble, the kind of trouble that might trigger a succession crisis even if he is actually dead. He is forced to give orders to prevent such a crisis, yet they are orders that may hamper his state if he is killed or captured. If this reminds you of *Game of Thrones*, that is probably no bad thing, but Quinn is generally better at explaining the point of view of people who are unpleasant by our standards but shaped by their own experiences and options.

The characters introduced in the last book continue to grow and develop, from Grendel’s son – now a leader of men in his own right – to the leader of the resistance, a soldier fighting the oncoming hordes, and one of Grendel’s more unwilling wives, who finds herself a pawn in his games. Quinn shows their options, some of the reasoning behind their decisions, and the high cost of war – and servitude – on the fighters and non-combatants alike. It also showcases the importance of logistics, and how one set of agreements can preclude others; Grendel, having made an alliance with cannibal fanatics, finds he is unable to discard them because it would worry the rest of his allies, who will start wondering – reasonably – when they are going to be sold out too.

The book’s greatest weakness, stemming from the fact that it is book two in a trilogy (Quinn promises more if they sell well), is that relatively little of great consequence happens, save for the events right at the end. It sets a great deal of groundwork for the third book, rather than being a story in its own right as well as advancing the overall arc.

Other than that, which is a fairly minor quibble, *Serpent Sword* advances the plot nicely and is a reasonably satisfactory read in its own right. There is, as might be expected of a military fiction book, a “certain amount of violence” not all of which is in our good cause; the sex scenes are not particularly graphic (indeed, it is made fairly clear that one scene is not consensual in any real sense of the word, even though there is no overt violence.)

Troll Hunter by Steven Vickers

Review by Jim McCoy

Jimbossffreviews.substack.com

Ya know, some of us have been reading fantasy for approximately elebenty three bajillion years (give or take a day) and we’ve got this whole thing figured out. Let’s face it when you’ve read everyone from Tolkien to Butcher, everything from *Dragonlance* to *Warhammer*, to the latest cozy fantasy and maybe even a twist of *Romantasy* (I blame my daughter for that) we know what we’re talking about. We’re all reading and all knowing. You cannot surprise us. It’s just not possible. I mean, unless you’re Steven Vickers, and you release a book called *Troll Hunter*.

Troll Hunter set quite a few of my expectations on their collective heads. That's not a bad thing. I loved the book. I've just never quite seen something that's set up this way. If it had been humans tracking trolls by magic, that would be one thing. The friendly neighborhood finger-wiggler ought to be good for something. Having humans track trolls by smell is a totally different thing, even if it works the same.

And, while Vickers certainly does have the right to build his world and the species within it, the trolls in Troll Hunter are definitely more civilized and have some specific physical vulnerabilities that I haven't seen elsewhere. One in particular works well within the story but is definitely atypical based on what I've seen elsewhere. I will tell you this though: These are not your great-grandpappy's AD&D trolls, where you can chop a finger off of one of them and not only will the troll grow a new finger, but the finger will grow a new troll.

All of that to say that it's good to see something new out there. There are some fantasy species that everyone screws with, and that's expected, right? JK Rowling, Margaret Weis and Tracy Hickman, Harry Turtledove, Naomi Novik, and Rebecca Yarros all have different takes on dragons. Trolls, on the other hand, have gotten kind of stale over the years. They're portrayed as big, dumb, regenerating enemies that can take a licking and keep on ticking. And Vickers's trolls are definitely big. They can take a bit of a beating as well. I certainly wouldn't consider them to be dumb though. And they don't regenerate. It's refreshing. As far as whether trolls and humans are enemies it's yes, but no, but yes. Seriously, you need to read the book to make this one work in your brain.

I love the characters in Troll Hunter as well. The two main characters are Gabriel Cullen and his daughter Isabo. Both are among the extremely limited number of humans that can track trolls by smell. The whole story centers around this weird ability of theirs. People follow them in more ways than one. The two are separated at the beginning of the book, and it ends up being Isabo's mission to find Gabriel, but they are a lot alike in temperament and their attitude toward trolls.

Isabo, in particular, is a firecracker. Fans of the blog (both of you) already know that I love a strong female protagonist. Isabo is precisely that, and for all the best reasons. She's physically strong, but not to the point where it's unbelievable, but her true strength is emotional. She's brave (in the pure sense of the word; she participates in combat) and she's determined. She leads a militia unit with skill and intelligence. She is, in short, the right person for the job and the right person for the novel.

I don't want to go too far into spoiler territory here, but Isabo is not the perfect heroine we see in far too many stories and that's an awesome thing. She has her flaws. One of them is both obvious and ominous. She is, in short, the human being she was written to be. I love that about her. Isabo is, in many ways, both the woman I want my daughters to be (takes no crap, achieves her goals, smart/inventive, willing to make her feelings known yet able to accept input) and what I'm afraid they might turn into (obsessive to the point where it hurts Isabo herself, other people and serves as a detriment to her mission, and blind to the consequences of what she's doing). Isabo is, in short, a well-balanced character if I've ever run into one.

Her father Gabriel is my kind of guy. He's a rugged outdoorsman who loves his family and his community. He's not shy about it. He has strong convictions and it takes a lot to make his beliefs waver. He does what's necessary because it's necessary, even if he doesn't like it. He is, in short, a real man by the definition I was taught at my father's knee. He also makes a mistake or two along the way, thus cementing his status as a flawed human being just like the rest of us. He makes sense.

The action sequences are well thought out, quickly paced and easy to follow. The humans in the book have a bit of an advantage that doesn't appear in other works of fantasy, but I loved that about it. A secret weapon kind of balances out the combat between the humans and the much larger trolls. It makes things believable while leaving the stakes real and the passages entertaining.

Trollish society is more developed than I've ever seen it elsewhere. Even as a World of Warcraft player, who saw Vol'jin, leader of the trolls, become the Horde Warchief, I don't think I've ever seen anyone really pay attention to trolls as a society as opposed to individual trolls. I like it. Everquest kind of gives trolls short shrift too. They get a crappy looking city and a story about how they got kicked out of another one. It's nice to see someone do something with trolls other than just setting them for the good guys to kill.

I really enjoyed Troll Hunter and you will too. But the even better news, even if I had to flip the page over and read it off the back of the next page like it was freaking All Quiet on the Western Front, is that The Saga of the Troll Lands continues... Which means we're getting MOAR BOOKS!! I can't wait. Neither can you. You just don't know it yet.

Bottom Line: 5.0 out of 5 Wandering Warriors

Prose Bono

Return of Rights

by Cory Doctorow <pluralistic.net>

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Disney has lost Roger Rabbit

Gary K Wolf is the author of a fantastic 1981 novel called *Who Censored Roger Rabbit?* which Disney licensed and turned into an equally fantastic 1988 live action/animated hybrid movie called *Who Framed Roger Rabbit?* But despite the commercial and critical acclaim of the movie, Disney hasn't made any feature-length sequels.

This is a nightmare scenario for a creator: you make a piece of work that turns out to be incredibly popular, but you've licensed it to a kind of absentee landlord who owns the rights but refuses to exercise them. Luckily, the copyright system contains a provision designed to rescue creative workers who fall into this trap: "Termination of Transfer."

"Termination of Transfer" was introduced via the 1976 Copyright Act. It allows creators to unilaterally cancel the copyright licenses they have signed over to others, by waiting 35 years and then filing some paperwork with the US Copyright Office.

Termination is a powerful copyright policy, and unlike most copyright, it solely benefits creative *workers* and not our bosses. Copyright is a very weak tool for protecting creators' interests, because copyright only gives us something to bargain *with*, without giving us any bargaining *power*, which means that copyright becomes something we bargain *away*.

Think of it this way: for the past 50 years, copyright has only expanded in every direction. Copyright now lasts longer, covers more kinds of works, prohibits more uses without permission, and carries stiffer penalties. The media industry is now larger and more profitable than at any time in history. But at the same time, the amount of money being earned by creative *workers* has only fallen over this period, both in real terms (how much money an average creative worker brings home) and as a share of the total (what percentage of the revenues from a creator's work the creator gets to keep). How to explain this seeming paradox?

The answer lies in the structure of creative labor markets, which are *brutally* concentrated. Creative workers bargain with one of five publishers, one of four studios, one of three music labels, one of two app marketplaces, or just one company that controls all the ebooks and audiobooks.

The media industry isn't just a *monopoly*, in other words - it's also a *monopsony*, which is to say, a collection of powerful *buyers*. The middlemen who control access to our audiences have all the power, so when Congress gives creators new copyrights to bargain with, the Big Five (or Four, or Three, or Two, or One) just amend their standard, non-negotiable contract to require creators to sign those new rights over as a condition of doing business.

In other words, giving creative workers more rights without addressing their market power is like giving your bullied kid more lunch money. There isn't any amount of lunch money you can give that kid that will buy them lunch - you're just enriching the bullies. Do this for long enough and you'll make the bullies so rich they can buy off the school principal. Keep it up even longer and the bullies will hire an ad agency to run a global campaign bemoaning the plight of the hungry school kids and demanding that they be given more lunch money:

<https://pluralistic.net/2022/08/21/what-is-chokepoint-capitalism/>

This is an argument that Rebecca Giblin and I develop in our 2022 book *Chokepoint Capitalism: How Big Tech and Big Content Captured Creative Labor Markets and How We'll Win Them Back*:

<https://www.beacon.org/Chokepoint-Capitalism-P1856.aspx>

Rebecca is a law professor who is, among other things, one of the world's leading experts on Termination of Transfer, who co-authored the definitive study on the use of Termination since the 1976 Copyright Act, and the many ways this has benefited creators *at the expense of media companies*:

<https://pluralistic.net/2021/09/26/take-it-back/>

Remember, Termination is one of the few copyright policies that solely benefits creative workers. Under Termination, a media company can force you to sign away your rights in perpetuity, but you can *still* claim those rights back after 35 years. Termination isn't just something to bargain *away*, it's a new power to bargain *with*.

The history of how Termination got into the 1976 Copyright Act is pretty gnarly. The original text of the Termination clause made Termination *automatic*, after 25 years. That would have meant that every quarter century, every media company would have to go hat in hand to every creative worker whose work was still selling and beg them to sign a new contract. If your original contract stank (say, because you were just starting your career), you could demand back-payment to make up for the shitty deal you'd been forced into, and if your publisher/label/studio wouldn't cough up, you could take your work somewhere else and bargain from a position of strength, because you'd be selling a sure thing - a work

that was still commercially viable after 25 years!

Automatic termination would also solve the absentee landlord problem, where a media company was squatting on your rights, keeping your book or album in print (or these days, online), but doing nothing to promote them and refusing to return the rights to you so you could sell them to some who saw the potential in your old works.

Naturally, the media industry **hated** this, so they watered down Termination. Instead of applying after 25 years, it now applies after 35 years. Instead of being automatic, it now requires creators to go through red tape at the Copyright Office.

But that wasn't enough for the media companies. In 1999, an obscure Congressional staffer named Mitch Glazier slipped a rider into the Satellite Home Viewer Improvement Act that ended Termination of Transfer for musicians. Musicians **really** need Termination, since record deals were and are so unconscionable and one-sided. The bill passed without anyone noticing:

<https://www.wired.com/2000/08/rule-reversal-blame-it-on-riaa/>

Musicians got **really** pissed about this, and so did Congress, who'd been hoodwinked by this despicable pismire. Congress actually convened a special session just to delete Glazier's amendment, and Glazier left his government job under a cloud.

But Glazier wasn't unemployed for long. Within three months, he'd been installed as the CEO of the Recording Industry Association of America, a job he has held ever since, where he makes over \$1.3 million/year:

<https://projects.propublica.org/nonprofits/organizations/131669037>

I recently got a press release signed by Glazier, supporting Disney and Universal's copyright suit against Midjourney, in which begins, "There is a clear path forward through partnerships":

<https://www.riaa.com/riaa-statement-on-midjourney-ai-litigation/>

In other words, Glazier doesn't want these lawsuits to get rid of Midjourney and protect creative workers from the threat of AI - he just wants the AI companies to pay the media companies to make the products that his clients will use to destroy creators' livelihoods. He wants there to be a new copyright that allows creators to decide whether their work can be used to train AI models, and then he wants that right transferred to media companies who will sell to AI companies in a bid to stop paying artists:

<https://pluralistic.net/2024/10/19/gander-sauce/#just-because-youre-on-their-side-it-doesnt-mean-theyre-on-your-side>

US Copyright has always acknowledged the tension between creators' rights and the rights of publishers, studios, labels and other media companies that buy creators' works. The original US copyright lasted for 14 years, and could be renewed for another 14 years, but **only by the creator** (not by the publisher). This meant that if a work was still selling after 14 years, the publisher would have to convince the writer to renew the copyright, or the work would go into the public domain.

This was in an era in which writers were typically paid a flat fee for their work, so from a writer's perspective, it didn't matter if the publisher made any money from subsequent sales of their books, or

whether the book entered the public domain so that anyone could sell it. The writer made the same amount either way: zero.

Copyright's original 14-year renewal was a way for creative labor markets to look back and address historic injustices. If your publisher underpaid you 14 years ago, you could demand that they make good on their moral obligation to you, and if they refused, you could punish them by putting the work into the public domain.

Termination has been a huge boon to artists of all description from Stephen King to Ann M Martin, creator of **The Babysitters' Club**. One of my favorite examples is funk legend George Clinton, whose shitweasel manager forged his signature on a contract and stole his royalties for decades (the reason Clinton is still touring isn't merely that he's an unstoppable funk god, but because he's broke). Clinton eventually gave up on suing his ex-manager and instead just filed for Termination of Transfer:

<https://www.billboard.com/pro/george-clinton-lawsuit-ex-agent-music-rights/>

If that sounds familiar, it may be because I used it as the basis for a subplot in my novel **The Bezzle**:

<https://us.macmillan.com/books/9781250865878/thebezzle/>

Back to Roger Rabbit. Author Gary K Wolf has successfully filed for Termination of Transfer, meaning he's recovered the rights to Roger Rabbit and the other characters from his novel:

<https://www.imnotbad.com/2025/11/roger-rabbit-copyright-reverts-to.html>

He discusses his plans for a sequel starring Jessica Rabbit in this interview with "I'm Not Bad TV":

https://www.youtube.com/watch?v=L_0lUiplxZk

Writing about the termination for Boing Boing, Ruben Bolling wonders what this means for things like the Roger Rabbit ride at Disneyland, and the ongoing distribution of the film:

<https://boingboing.net/2025/11/17/disney-loses-the-rights-to-roger-rabbit-characters-as-they-revert-to-original-author-of-novel.html>

It's not clear to me what the answer is but my guess is that Disney will have to offer Wolf enough money that he agrees to keep the film in distribution and the ride running. Which is the point: when you sell your work for film adaptation, no one knows if it's going to be a dud or a classic. Termination is copyright's lookback, a way to renegotiate the deal once you've gotten the leverage that comes from success.

If you have a work you signed away the copyright for 35 years or more ago, here is a tool from Creative Commons and the Authors Alliance for terminating the transfer and getting your rights back (disclosure: I am an unpaid member of the Authors Alliance advisory board):

<https://rightsback.org/>

Forensics for Writers: Part 3
By Cedar Sanderson
<https://cedarlila.substack.com/>

This post was originally published over at the Mad Genius Club in March of 2016, and the same caveats apply as in the last two of this series. While I never worked in my degree field, I read extensively and do write mysteries these days. Which is fulfilling and not nearly as messy.

I was up a wee bit too late last night celebrating my brother-in-law's birthday. I also hung works of art in my first art show, which was very exciting. Oh, and had a midterm exam in Anatomy & Physiology. So... I'm a bit brain-dead.

I debated including this section (You can find part one here, and the second part here). Strictly speaking, evidence collection is very important to forensics - don't do it right, and you risk destroying evidence, or not collecting vital pieces, or... so many mistakes can be made. But it is a tedious process, and one that is likely to be boring to readers. But on the other hand, it's vital to building a case if done right. Also, I have a handy case summary from a class assignment, and I desperately need more coffee before returning to the con.

These are the evidence collection notes, then summary that the investigator would present to a prosecutor who would then determine if the case was worth pursuing. It's interesting to note that something like 20% of robberies are 'closed' which is, resolved in some way. Only 20%, and normally DNA testing would not be allowed to the investigator for budgetary reasons on this relatively minor crime. I have to wonder as DNA tests become faster and cheaper if the robbery closure rate will improve.

12/24/2010 2243 Crime Occurred

12/24/201 2330 Arrival on scene of investigator

After conversation with officer on scene, investigators began preliminary scene survey, taking overall photos of the front of the store, the entrants, the parking lot, the freshly swept sidewalk. The investigator then proceeded to the rear of the store to photograph the alley the suspect had been seen fleeing into, per the officer on scene. Before entering the store, the investigator also photographed the locations of the video surveillance cameras.

During cursory search, one cigarette butt was collected from swept sidewalk after photographing it in place and with scale. The investigator is wearing gloves and will be for the duration. The butt was collected with gloved hands, placed in a small bag, sealed, labeled, and the note made to send it to lab for analysis of brand (classification) and possible DNA (individualization).

As responding officer stated he had not entered the store, the investigator used oblique light to locate and photograph footwear impressions as the clerk had just cleaned floor. Used sticky lifter and powder to preserve impression for comparison to clerk's footwear and exclusion for suspect.

The investigator took a buccal swab from the clerk (Slim Pickins, DOB 4/1/69) and exclusionary fingerprints. Buccal swabs should be done while gloved and sent to the lab in the provided box or envelope for DNA testing. Before fingerprinting, a GSR test was done on the clerk's hands, and finally footwear impression prints were made for exclusionary purposes.

Obtain the clerk's gun from him in exchange for a receipt. Recorded the serial number ABC 123 and photographed the gun and serial number. Secured in special box with zip ties. Sent to the lab to be test fired, analyzed for fingerprints, and compared to spent shell casings with tool marks.

In the store, the investigator photographed the overall scene, then photographed the bag of chips, once in situ, once with scale ruler. Carefully collected the bag of chips for potential fingerprints. Secured with packing material to prevent shifting and damage to potential prints in the box.

Collect, after photographs in place and with scale, the packet of cigarettes from the counter to test for prints in case the suspect touched them. Again, secure in a box to keep from sliding and damaging prints rather than placing them in a plastic bag where friction could obliterate the prints.

Photographed the bullet casings in place and with scale. Collected into small containers, separately, to be analyzed for tool marks or fingerprints.

Collected the plastic cash tray after photographing in place and with scale. Place in large box, secured, to be analyzed for fingerprints. Find out if there are other clerks to get fingerprints from them for exclusionary purposes as well.

Check the cash register for fingerprints. Lift and package for the lab to analyze.

Collected all the cigarette packs the bullet had traveled through, photographing them in place, with scale, and again as each is removed. Left the bullet in the last pack and note this for the lab. Ask the lab to analyze for markings on the bullet and the packs of cigarettes can be used for determination of trajectory. Record on evidence the order of the cigarette packs so the lab can put them in proper order.

When officers reported the discovery of the jacket, the investigator went to where it was found and photographed it in place, with scale, and then each item as it was discovered. Collect the jacket to be tested for DNA from cuffs and collar. Secure in paper bag with note to check for hairs.

Photographed the ammunition in the pocket, by holding it open, then place scale and photograph again. Collect in vial containers, keeping it separate, for comparison with the spent rounds in the store (classification) and fingerprints (individualization).

Photograph receipt and place in evidence envelope to be tested for fingerprints.

Obtained the video surveillance footage for both the time of the crime and the earlier purchase time (plus an hour before) of 7:25 per the receipt found in the jacket. Investigator reviewed them to look for the customer with the jacket and named items, and then for the crime itself.

Presentation of evidence and facts in the case #10-69075 with recommendation to proceed in detaining one Cody Criminal, DOB 01/01/85; SSN:123-45-6789 for questioning about the robbery at Quickie Spirits 'n More at 2243 on 12/24/2010. A warrant to search his residence for the weapon used in that robbery should be issued.

On the night of the robbery, a man entered the Quickie Spirits 'n More at 2243. The clerk observed him to discard cigarette butt onto the freshly swept sidewalk as he entered the store. The investigator later recovered the butt, and the lab analyzed the DNA and found it to be consistent with Cody Criminal. The man stepped into the shelves and picked up a bag of chips, bringing it to the counter. He laid them down on the counter and asked for a packet of cigarettes. The clerk stated that the man's breath smelled

of beer and cigarettes. The bag of chips was recovered by the investigator later and a latent print was taken from them, after running through IAFIS the print was determined to be the right index print of Cody Criminal.

The clerk testifies at this point that that when he turned around from getting the cigarettes, the man was pointing a gun at him and demanding 'all the cash.' The clerk started to comply, opening the cash register. There was a brief struggle, and the clerk took his gun from below the counter and fired it at the suspect (this was confirmed by GSR residue on the clerk's hand), the man then fired back, his bullet striking the cigarette packs in the rack behind the clerk. Laboratory testing matched one casing to the clerk's gun but were unable to match the casing or spent bullet to a firearm in NIBIN. The suspect's firearm is sought for comparison purposes.

Following the shooting, the man fled on foot to the rear of the store. Police officers searching later discovered an Alabama "Roll Tide" jacket one block away with unspent ammunition and a receipt in the pocket. The jacket was tested for DNA which was determined to be consistent with that of Cody Criminal. The receipt, from the Quickie Spirits 'n More on the same date as the robbery but at 1925, was found to have a latent print which was run through IAFIS and confirmed to be from the left thumb of Cody Criminal.

Review of the video surveillance by officers showed that a man matching Cody Criminal's previous mug shots had been in the store and purchased the items on the receipt at the time stamped on it, and that he was wearing the Alabama Roll Tide jacket at the time. Again, at the time of the robbery, the video showed a man in a Roll Tide Jacket entering the store and confronting the clerk. Based on the physical evidence there is sufficient basis to proceed with an arrest and warrant to obtain the firearm used in the robbery.

Forensics for Writers: Part 4 By Cedar Sanderson <https://cedarlila.substack.com/>

This article was originally published at the Mad Genius Club in March 2016 while I was still working on (but very close to finishing) a degree in Forensic Science & Investigation. A decade later and I never worked in my degree field, but I did finally get up the courage to start writing mysteries.

First thing, before the gory details: it's blood spatter, no L. Not splatter, even if that is descriptive of how it got there, and there, and ew... there. The technical term is spatter, not splatter. Now that I have assuaged my inner editor...

As a writer the mystery of a crime scene can be worth revisiting, just as an investigator must do to try and recreate what happened there, from the evidence left behind. In the case of a violent crime, that evidence can speak volumes from the blood. The human body only contains 5-6 liters of blood (roughly) but it is under pressure as the heart beats. To an investigator, blood reveals much. It can reveal whether the bleeding person stood still - a passive droplet is completely round, but there are differences in the shape dependent on the surface it fell on, which can lead to 'satellite' splashes as the blood strikes a hard surface. The blood will show the direction a person was moving - you look at the 'tail' of a drop, and it is pointing in the same direction the drop was moving when it touched down, like a tiny accusatory arrow.

Blood that is coughed up, or expired, will have tiny bubbles in it, a distinctive indicator of internal

trauma that can remain long after the injured person moved on. From a deep wound, arterial spray shows gouts of blood, and if it was directed against a vertical surface (as I have seen a photo of someone trying to make it down a stairwell) you will see peaks in the wave-like pattern, from the beat of the heart, but the peaks get lower, and finally there is the last big smear as the injured person fell against the wall and too the floor.... You can prove death without a body in the case of spilling so much blood the body could not have sustained a heartbeat and would surely have been dead.

When an object strikes the body with sufficient force, blood leaves the body. The level of force, and roughly the size of the object, can be determined from this. A gunshot wound will show signs of high-velocity blood spatter, which is defined as less than 1 mm in diameter. This never travels very far, so you are most likely to find it on the victim, the suspect if they were within a half meter of the wound when it was made, or objects that were close. As the bullet strikes the body, the blood is projected outward in the opposite direction, but this isn't blowback - that is the powder residue of that gun which will land on the shooter's hand and clothing.

The size of an object makes a difference in the size of the blood spatter. An object with a smaller diameter, say, a length of rebar, will cause smaller droplets than a baseball bat. In class we speculated about what kind of spatter a cast-iron skillet would cause - I'm going to guess fairly large, low-velocity spatter, more than 4 mm in diameter. Messy... Medium-velocity spatter falls in between, from 2-4 mm in diameter. All those are rough numbers, but they allow the investigator to see patterns, like castoff from an attack where the victim was struck more than once, and the bloody implement slung droplets off as it was brought down again. Long, thin trails of castoff with small medium-velocity droplets indicate a sharp blade like a knife or a sword. These cast-off marks can show what hand the suspect preferred, useful if you need to know you are looking for a sinister rather than a dextral.

Currently, most crime scene analysts (ignoring the TV shows, please) carefully measure and plot the directionality of the droplets, to get an idea of where the victim was, where the assailant was, any movement during or after the attack - this can be told by altered marks, which can show smearing and retain prints of friction ridges, palm prints being as useful as finger prints. Movement after a certain time leads to what are called skeletonized droplets, which dry from the outside in. When touched, the still liquid interior smears, but the dry outline, or skeleton, remains. This drying begins at roughly (depending on atmospheric conditions) fifty seconds. This allows a timeline of the crime to be developed. There is a formula for determining the angle at which a droplet hit the surface, $\text{Sin}(\text{impact}) = \text{width}/\text{length}$. And if something or someone was at the scene, and then removed, that absence causes missing blood, which is called a void.

Related to the determination of the angle at which blood struck a surface is the determination of what angle a bullet was traveling when it struck a person. Ballistics is only this - it is not marks on the bullet itself or the firearm, those are properly referred to as toolmarks. "Ballistics (from Greek βάλλειν ballein, "to throw") is the science of mechanics that deals with the launching, flight, behavior, and effects of projectiles, especially bullets, gravity bombs, rockets, or the like; the science or art of designing and accelerating projectiles so as to achieve a desired performance." You can find a cool calculator [here](#).

Using ballistics, your investigator can discover where the projectile came from, how far it was likely to have traveled, based on what sort of bullet it was... pistols and shotguns don't have a terribly long range, but that rifle bullet could have traveled hundreds of meters, and a sniper round even further. Determining the sort of bullet falls under next week's post on toolmarks, fingerprints, and other ways criminals leave their signatures at a scene.

You can find week one here, the Introduction, then Crime Scene, and Evidence and Investigation. I am

planning two more installments, one on marks and another on toxicology, and perhaps one last post wrapping it all up with a list of the links and resources for people. As always, ask questions in the comments and I'll answer there, or in the posts where they fit. Hopefully this is being helpful to some!

Forensics for Writers: Part 5 By Cedar Sanderson <https://cedarlila.substack.com/>

Toolmarks and Firearms

A great deal of the forensic scientist's time is spent peering into a microscope. Our fictional heroes aren't interested in that tedium, and neither are the readers of their adventures. But understanding what the results of that microscopic inspection reveals, and what it means to an investigation, that's important. And as with any other aspect of this, a hero or villain getting it wrong through incompetence or malice adds to the conflict in a book, even if we don't want to see it in real life.

I think all of us can grasp the concept of a tool leaving a mark when it is used to, say, pry open a window or a door. But logically, this isn't going to be terribly helpful in identifying the specific tool that was used - after all, hundreds if not thousands of crowbars have been made in various configurations. However, through the use of a comparison microscope that allows the side-by-side comparison of the marks and the tool, individualization can be made in some - not all - cases.

I'm not sure I covered the two classes of evidence before, so this is a good place to touch on it. Classification is the sorting of physical evidence that will match a class of something. Cotton fibers, that mark was made by a crowbar, those footwear impressions were made by Doc Marten boots. Classification is useful in narrowing the field down, but what every investigator wants and hopes for is individualization. This cotton fiber with cochineal dye belongs to that shirt. This crowbar with the nick in the pry surface made that mark. These boots with the cut on the sole made that impression. Such evidence can tie a suspect or his tools to a scene.

Tools can acquire unique characteristics through wear and tear. I've chipped and dented many by dropping them, personally. Tools that have come in contact with paint can carry away traces of that paint, which can be classified or individualized. There is, and this is pretty cool albeit very nerdy of me to call it that, a paint database. The RC Mounted Police maintain PDQ, the paint data query, which is used worldwide to determine where that paint came from, what it was used on, and so forth. Even if you can't individualize something, enough classifications can resolve into the pointing finger of probability.

Side note for our heroic investigator (or the curling-mustachioed Snidely (sorry, channeling Dudley here)) is that you would never, I don't care what you've seen on TV, attempt to match the tool with the mark on scene. You can alter and destroy evidence that way. The correct procedure is to make a cast of the toolmark with a special kind of silicone called Mikrosil. Later, at the lab, a stereomicroscope will be used to compare the mark with the tool.

Firearm evidence is a huge field, but I'll cover the basics here, of what marks a gun leaves on bullets and casings. When a bullet is fired, and forced through a rifled barrel, minute striations are left on the soft lead of the bullet by the rifling marks in the barrel, called lands and grooves. In theory, a second test-firing through that same barrel can produce a bullet which will have matching striations, and they can be matched under a comparison microscope. Those of you who are familiar with firearms will immediately see the problems inherent with this. Not all firearms will have rifling. Shotguns, for instance, cannot be matched in this way. Alteration of, or removal of, a barrel can also alter the test firing results.

My instructor a while back, an actively serving detective sergeant, would get entertainingly frothy in class about the moron on TV who routinely picked up suspect weapons by inserting a pen into the barrel. Granted, this will not alter the inner map of the barrel much, but it would not take much for the defense to introduce doubts in the jury's mind.

Sometimes the other end of the action, the casing, can be more helpful than the projectile. While a revolver leaves no casings behind for our intrepid investigator, a semi-automatic ejects them automatically (heh). A savvy criminal might police his brass, if he has time. But the marks left on casings by the ejector, the firing pin, and even fingerprints from loading, can be possible individualized evidence in building a case. It helps if the investigator knows what he is looking for. A while back in a non-investigative CJS class, I had to read and write an analysis of a case. In it, the evidence was listed, and one thing they found in and around the house of the shooter in question were numerous (something like 40 without looking at the case file) unfired casings. That, to me, was hinky. I would have been very unhappy with taking that evidence anywhere listed as it was (the professor of that class got very impatient with my hang-up on the evidence, which I found funny). Do you know why it struck me wrong?

Forensics for Writers: Part 6 By Cedar Sanderson <https://cedarlila.substack.com/>

This article was originally published at the mad Genius Club in April, 2016, which seems like a lifetime ago. This series may also seem like it's taking a lifetime, I do believe it is the longest one I ever wrote. Funny how a flibertigibbet like myself can buckle down and focus on a single topic when she puts her mind to it.

I've discussed blood spatter, the external signals that blood at a crime scene sends, earlier in the series. Today we are going to look at what is in the blood, and very briefly cover three large topics. While I would happily cover toxicology, serology, and DNA tests in at least three posts, I am trying to wrap up this series and not bore you all with the minutiae. I know I find it fascinating, but then, this is what I want to do. The field investigator collects the samples that will tell lab analysts their story - there is very little that can be done in the field with these three topics, and no conclusive tests. The stories written inside the blood, the flesh, the stomach and the brain can only truly be read in the lab, so to the lab we will go.

I don't think I have ever read a mystery that was, realistically, about an analyst. Unlike the TV shows, and the Jefferson Bass books I've read and (mostly) enjoyed, while an analyst may go into the field, they don't carry guns and they don't do the detective's work. They look at the inanimate, the inert, and they make it talk. Which is why they play an important role in solving real-life mysteries, and why mystery writers want to include them, even if they sometimes make that participation in solving a mystery rather implausible. Reality is that the analyst in a lab may be miles and miles from the crime scene, may never even know where it was, and may not initially know the name or face of the victim. They will in the long run, though. *Melendez-Diaz vs. Massachusetts* set the precedent that the person who analyzed the evidence must appear in court to present that analysis.

So what is the lab boffin reading in the samples they receive? Serology, the study of serum and other bodily fluids, is the division that handles blood typing, among other things. While this may seem old-fashioned in the face of DNA tests, blood typing is fast, relatively simple, and able to exclude some suspects almost immediately. Because typing could actually be done in the field, it is an interesting idea to hand to a writer who wants to put some constraints on their investigator and his abilities to utilize a

lab. Stuck in the wilderness? Marooned on a distant planet? If you mix a known sample from, say, Suspect A, with a suspected sample from the crime scene, and the blood agglutinates (read: curdles, clots, and goes lumpy) then you know it wasn't him. Blood type A has antibodies for Blood type B, and ne'er the two shall mix. Same reason you cannot just randomly transfuse blood from one person into another one without first typing the blood. Good way to kill someone fast, that. Which makes for a gruesome if somewhat obvious murder weapon.

Toxicology is the analysis of foreign substances in the blood. Blood carries both nutrients and wastes, which means that testing the blood can tell if a poison is present. Not always - there are substances that don't remain in the blood, but we'll start here since there is a specific substance which is the most tested-for in a toxicology lab. Alcohol in the blood has a relationship to the level of alcohol in the brain - and to the level of alcohol in the air you exhale, as the alcohol diffuses out of the capillaries in the lungs into the air there. That constant equation is what allows the 'breathalyzer' to be used and accurate for field sobriety tests (the device used is no longer the actual breathalyzer, but the name has stuck, and I suspect will stay with us as long as people are blowing into funny tubes to prove they aren't drunk os-sifer, even when we are scattered to the stars). The lab backs up the breathalyzer result by analyzing the blood alcohol levels. Which brings me to something I learned in class. I knew that in the US, the BAC for legal drunkenness is .08 %, but we learned that in other countries, it is much lower. In France, it was 0.05, but may have been lowered to 0.02 which was already the level in Sweden. Finland and Australia (among others) have their level set at 0.05.

Moving away from the most common intoxicant, we come to the more interesting (IMO) part of the toxicologist's job. To take a sample of body fluids, stomach content, or a piece of an organ, and to accurately discover the presence of a drug or poison in them. With the gas chromatograph-mass spectrometer, this is a much more plausible task, but still, we are not talking about a lot of whatever-it-is. The toxicologist may have an idea of what the offending substance is from descriptions of the symptoms and pathology of the victim, but they might not. Screening out all the 'nopes' can take a good bit of time and patience. You aren't talking about the amount that is/was in the initial dose, which may have ranged from microgram to milligram in amount, since the body will have absorbed or metabolized some if not all of it. There are some drugs, like the infamous succinylcholine, which metabolizes completely to succinic acid. Cases like those would be impossible to solve if there was not already a suspicion of what was used, and equally important, a knowledge of what to look for - in this case, in the brain. Another example is heroin, which immediately metabolizes to morphine, a known reaction, and even then, since it bonds with carbohydrates, morphine can only be found in the urine in a relatively small percentage of the dose taken.

I mentioned the GC-Mass Spec, and as it is a favorite of lab jargon in TV shows, I thought I'd describe what it is and what it does in more detail. It is actually two linked instruments, the gas chromatograph, and a mass spectrometer. The gas chromatograph operates on the principle that some molecules will travel faster than others through a specific substrate/gas medium. The sample is injected in very small amounts - when I was doing this in the lab, we were injecting a microliter (for those who aren't familiar - that's less than a water droplet, which is usually closer to 2-3 microliters), and told that very little of that would actually travel through the coil after vaporization - heated instantly, and the vapor passed through a very thin tube - little larger than a human hair - which is coated with a specific stationary phase. Some molecules will pass through without stopping, others will cling to the stationary phase briefly before passing through. In this way, when the sample reaches the spectrometer, they are separated into discrete parts. They are bombarded with high-energy electrons, which breaks them up even more, and then they pass by a detector which records the spectrum emission. This analysis of their mass is then read against a comparison library of known samples, and the unknown can be determined with a very high degree of accuracy.

And I'm all out of room for DNA in this post. I mean, I could get into it, but it's a fascinating topic so if you all want to hear about it? I'll talk it over next week. Let me know in the comments but be aware that because of heightened public awareness of DNA through media and entertainment, it is considered the gold standard of physical evidence.

Forensics for Writers: Part 7 By Cedar Sanderson <https://cedarlila.substack.com/>

Next week will be the wrap-up, but as I said last week, DNA needed a post all its own. I'm going to get more into the speculative here, this is a fascinating and rapidly changing field when it comes to any aspect of science, not just forensics.

DNA (deoxyribonucleic acid and isn't that a lovely thing to say ten times fast) is considered the gold standard because of two things. One is based on math - the probabilities of two people matching across 13 alleles is something approaching billions if not trillions to one. With this in mind, if we have that full loci match, we can assuredly say that this person shed/bled/left this bit of DNA at the crime scene. Which isn't to say that they did it, but I'll get into that in a bit. The other reason this is the gold standard is television. The TV shows may get 90% of their stuff wrong, but this doesn't matter to the general public. And the jury is drawn from the general public. The result is that juries almost demand there be DNA evidence presented to them.

With modern technology, DNA can be extracted, amplified, and sequenced from a single skin cell. Even hair, which unless it has been yanked out and retains the follicular tag, has no nuclear DNA, contains mtDNA and can be used to narrow down the identification of a suspect or a victim. The problem, of course, is finding that single cell to work with. DNA, like any other evidence, has drawbacks. For one thing, although the cost is falling and the time to run tests is going down with it, it's still not a cheap or easy test to run. A skilled technician is needed to run the process, and interpretation of the results isn't always clear-cut.

Imagine this. There's a crime scene, and it's been swabbed for DNA and tests are being done. We're talking swabbed down to the single-cell collection point, and it's a house where, say, drugs were being sold. Random people in and out all the time. The investigator had tried out a new shampoo, and it made his scalp react and he's got dandruff. The first officer on scene sneezed. The victims were stabbed and staggered through the house leaving blood trails everywhere until they died on the kitchen floor. A young woman and her dog (don't kill the dog in a story. Readers hate that). So we have contamination, commingled blood from two humans (at least, the killer(s) cut himself) and a dog, and oh, yeah, it's August, they didn't have air conditioning and it must be 40 deg C in the house by the time they were found. At that temperature, DNA starts to break down. Or, wait, even worse - they got out to the end of the backyard and died in the little creek back there. Water. Water is not the forensic scientist's friend.

While I know I could separate out the dog's DNA from the humans, interpreting commingled DNA is a challenge, and that first uniform who sneezed (vomiting would almost be better because then the later investigators would have known about it. The sneeze was barely noticed by the guy, and he certainly didn't think to tell anyone) meant that there will be an unknown profile in the samples near the side door where the attack initiated. There will also be profiles from people who were in the house recently. It's going to be complicated, messy, and expensive. In a murder investigation, this isn't really a factor, but in a lesser crime like a robbery, no department is going to this level to investigate.

DNA is not cut-and-dried, and as you write your story, this can be either a good thing or a bad thing. Good because we aren't yet at a level of technology that allows every crime to be solved simply by scanning DNA at the scene and proclaiming 'Eureka! 'Twas him!' within minutes. Even when on-site DNA testing is possible - and it's coming - there will still be all the complications I touched on in my scenario, plus more I couldn't work in there. I'm not downgrading the on-scene investigators, I've sat in classes with some of them, been taught by another, but the reality is that they aren't trained for everything that I'll be trained for, and I won't be trained in some aspects of their job (although the other half of my degree is Investigation). The lab and the field aren't the same. Even if you're writing science fiction in the future, complete detection, interpretation, and analysis of DNA is going to remain more complex than waving a magic wand. Although there's an interesting story idea there using Clarke's Law...

And the bad thing about DNA can actually be helpful to the writer. Introducing conflict, and tension, by having DNA not come back usable can be useful. Your investigator will have to work harder. Your villain will have to try to be sneaky in weird ways as they attempt to leave no DNA behind them... which will mean they miss something by over-focusing on that. Writers dream up hyper-intelligent criminals, but in the real world most of them are doofuses, to steal a word from Peter Grant (I always enjoy the Doofus of the Day posts when I catch them on his blog). We don't need DNA to convict the doofuses of the world, but as I said above, juries expect it. When the proceedings go to trial, which doesn't happen much of the time.

DNA may not be the miracle drug of the forensic world, but it does come close. I've enumerated some of the flaws, but it remains the most individual and solid of evidence in a case. In a few short decades, we have come from needing a lot of DNA material (blood or semen, usually) to being able to accurately process a profile from touch DNA - the shed skin cells left on a doorknob, for instance. I know I said that I don't think there will ever be a magic wand, but I do think that with a trained, skilled operator, that wand might start to approach magic. I also think that public perceptions of DNA and what it can be used for, which might not be accurate, may drive policy and legislation in unexpected directions.

DNA databases are the other half of this tool. Once you have a profile, what do you do with it? From the TV, and books about crime, I suspect most of you are already familiar with CODIS. What some of you may know, and something that has implications for us as people as well as writers, is that the Supreme Court has ruled that anyone arrested for a major crime can have a DNA sample taken and entered into the database. Arrested - not convicted. Above and beyond the implications of this, are the growing privately held databases of DNA that are being created for genealogy purposes. What if your investigator is given access to one of those? I'm sure there are contracts between the company and the individuals who send in their samples to be told how much of a Neanderthal they are... surely there is some kind of privacy shield in place. People are too savvy to just let their DNA be stored anywhere on any old server (reached in and shuts off internal snark button) Ahem. Where was I? Oh, yes... could your investigator, armed with a warrant and Truth and Justice on his side, gain access to these private databases?

What about the movement to have everyone sampled at birth? What if this goes on?

And with that, I shall leave this topic. Next week, I'll wrap up and answer any lingering questions.

Forensics for Writers: Part 8 Cyber Forensics
by Cedar Sanderson
<https://cedarlila.substack.com/>

This was originally published at the Mad Genius Club in April 2016. It is the final essay in my series breaking down how forensic science actually works at a high level for writers. I hope it has been helpful for someone, and not too terribly tedious for most.

There are whole missing sections of this, like questioned documents and what's sometimes called 'cyber forensics' so do understand that this is a light overview of the world of forensic science. Since literally any sort of scientist could be called on to use their knowledge in a legal case, forensic science is very broad. There are, for instance, forensic botanists, odontologists, geologists... I left off the cyber forensics because it is the field I am least familiar with. It is, however, one of the fastest growing and most challenging in the legal aspects of it.

Consider this: If you have a phone, like the recent case with Apple, the FBI, and the San Bernadino terrorists, how do you get into it? When do you need a warrant? What do you do to prevent a phone that belongs to a suspect who is still alive and on the run from being remotely accessed? A mobile phone contains a wealth of information, enough to be comparable to carrying in your hip pocket what would have taken a warehouse to store back in the time of the Constitution's writing. The phone is very tempting to the forensic analyst. But it is also clearly protected from search and seizure under the 'papers' of the Fourth Amendment.

The Fourth Amendment of the U.S. Constitution provides, "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

As a writer, this is an interesting wrinkle to explore. As a citizen, knowing that your whole life is on that device, and that it can be collected into a Faraday bag that will cut it off from all signals, and laid open to an investigator, it's even more interesting and I used that word in a not-so-good sense. Laptops, tablets, GPS devices, all of these can be used to track and trace a subject's path not only in the physical world, but the cyber one as well. Here, again, the TV shows with their hacking and hacker-types are pretty far off base, I'm given to understand. But it's not my specialty (mine is more sticky, and stinky, and wet) so I'm not going to address it at length. Feel free to take it up in the comments, or if someone wants to write a guest post, get in touch with me. I'd like to include the topic in the series.

Because this series is also meant to be a springboard for speculation on 'what comes next?' for those of us who write science fiction. Cyber forensics is the wave of the future, as the 'Internet of Things' is born, and our devices become smaller, more fictional (Dick Tracy watches, anyone?) and possibly, implanted into our very bodies. How do you access an implant without consent based on a warrant? What happens if you have a crime scene where an implant has been removed? What if removing the implant from the body's biofeedback wipes it? How do you keep a victim alive long enough to forcibly download them? And prevent the signal from reaching investigators who could use it to triangulate into your position?