

Contents

1	Preface and Caution	1
2	Despair in Ergosphere	1
2.1	Part 0.	1
2.2	Part 1.	2
2.3	Part 2.	4
2.4	Part 3a.	6
2.5	Part 3c.	6
3	Entropy Divergence	7
3.1	Part 3d.	7
3.2	Part 4a.	8
3.3	Part 4b.	8
3.4	Part 3a.	9

1 Preface and Caution

Mad Steins;Gate spoilers are contained within.

2 Despair in Ergosphere

"Oh no! I just wound you! Don't tell me you're broken," cries the hostage in blue, holding her grandmother's pocket watch and saying these words for - is it, perhaps, the first time?

If so, tell me, lone observer: How is it that you've heard it before?

Well. This time things may be a little different than you remember them.

"So not fair. I've taken extra good care of you and everything."

2.1 Part 0.

Tradition dictates that we open the work with introspection and philosophy. Let us consider a twist, then, on the classic question: Can a multiverse of diverging world lines be justifiably called infinite? We can trivially *imagine* an infinity of different configurations, but there is no guarantee that every world which is possible is real, let alone reachable.

What is the scale and the scope of the possible? Our own universe is quite finely tuned: a mere half-percent adjustment to the strong nuclear force would make *carbon* a precious rare element, and a full 2% would make

stars as we know them impossible; our existence is already an exercise in the arbitrary and ridiculous. Surely then we ought keep an open mind when it comes to exotic universes. One writer I know would have you imagine a spacetime with a positive-definite Riemannian metric, where one can stop or reverse the flow of time itself by flying about in a clockwork rocket!

In our universe of ridiculous universes, what laws must we find to be truly immutable? What mathematics underlies the last bastion of sanity as our imaginary universes teeter on the madness of seething, untameable chaos?

Chaos. Order. The progression of order to chaos. Surely, in any set of laws one can propose, it must remain a fact that there are more ways to be chaotic than there are to be ordered. Statistics, then, must rule over all, and the ultimate law of all universes is entropy.

But we must put aside our feeble poetry for now and return to our ship of fools. Oh, yes, they chase phantoms as before. What will happen, I wonder, if they catch one?

2.2 Part 1.

The hostage has been shot.

Under other circumstances, these words would have made a lot of sense together. There are many like them. The mad scientist, forever working to unseat the ruling world order, has just been betrayed by his friend - well, his casual acquaintance - and delivered into the arms of the mysterious world shadow government for they are, after all, bent on total world domination. But our mad scientist is an innocent young soul, years of wearing his role as an amusing game has warped his instincts, and, well, there had been one or two untimely distractions after that text in the supermarket...

But Okabe's mind is not capable of appreciating this fact right now. It can see only his best friend, tumbling to the floor, lying on her back in a pool of red - so much red! - still breathing, eyes gazing up at the ceiling, through the ceiling, to the stars. She does not cry at the pain; instead, she *smiles* (how brightly she smiles!) and reaches up her hand to the sky and

(his own psyche teeters on the edge of its own event horizon. he may have said something. "what the hell is this?!? you'll pay for this!!!" but he's not quite all there)

the door to the lab splinters, kicked in, its cheap lock no match for the fury of a skilled warrior. Okabe's mind is still not working, and it finds itself distracted (now of all times!) by the trivial, the broken door, his fear of a confrontation with Mr. Braun. A flush of shame burns his cheeks as he realizes its triviality, but now the dust has settled and Moeka is pointing a

gun at Suzuha on the floor and she is pointing one back: click-click.

/The warrior understands on a level below conscious thoughts: Moeka is no trained killer, and unused to the adrenaline rush of combat, she will find it hard to pull the trigger a second time. But the betrayer might still react if Suzuha were to move suddenly, and if either of them shoot or if she waits too long the thugs will waste no time turning the room into a killing zone. She will rely on the gambit, then, and risk herself -/

"The 50 inch television downstairs. It's on."

The part of Okabe's mind that understood the broken door makes itself useful, now. The 50 inch television belongs to Mr. Braun. The 50 inch television acts as a lifter to power the *PhoneWave (Real Name TBD)*. He can send a D-mail. He can do better than a D-Mail. He can save his friend -

he lurches towards the computer, unsteady -

another gunshot (*LOUD*) (*half-deaf*)

the computer is already on (thank God for small favors), screensaver ends at the click of a button, he puts on the headphones -

another shot, and Kurisu jumps - flies - through the air, shielding him with her self to buy him the seconds he needs to disable 'test mode' and initiate the sequence (*I hope to God he was paying attention when I showed him that*)

but

her body is not enough, the bullet flies on through her shoulder and strikes the CRT monitor and the glass *implodes* before his eyes

and he is in terror and he cannot

breathe and

it's all impossible it's wrong how can it *be* can it *be more wrong*

all his hope be snatched away

and

then, he

hears the impossible scream.

As a would-be mad scientist, Okabe has of course joked about his hostage's screams of terror. Indeed, as he played at the classical mad scientist he would gladly pretend to have *many* opinions on the topic of screaming, and also possessed several real opinions on the subject of maniacal laughter. As a true friend, though, Okabe in fact knows his hostage's real scream from various misadventures together and the occasional horror movie. It is a shrill noise, loud enough, but with a tenuous, wavering quality. Would it be strange to say that he cherished this scream? for knows of her strength and also her fragility, cherishes this facet of her too.

Yet even as she fell, struck the floor, Mayuuri did not make a sound. Her landing, even, was implausibly soft; the short, violent journey to the doorway of death, impossibly peaceful.

The sound now hurting his ears is shrill, wavering, but impossibly loud, impossibly long, a terrible scream of *tortured agony* and brutal, animal rage. The building shakes, a little. The lights flicker and go out, fluorescence replaced with a crimson glow of the deepest, reddest red.

2.3 Part 2.

"Grandma?" asks the little girl.

"No, no." says the voice. "Not just yet."

"Oh. I thought for a moment that I had been . . . shot. That I was going to die."

"It's okay. You were shot."

"Oh. It was - it was Moeka, wasn't it."

"Yes."

"So if you're not Grandma," inquires the girl, a little older than she was a moment ago, "are you an angel?"

The voice laughed. "I would be *honored* to be called that."

The girl turns to face the voice. "Oh!" she says in surprise. "For some reason it seemed like you might be very, very old. That's why I thought you might be Grandma. But you don't look old."

"You weren't wrong, and you weren't quite right either. I am older than the stars, and I am as young as you."

"You're beautiful."

"Thank you," says the gold-eyed angel.

The girl in the blue dress pauses a moment.

"Why did Moeka shoot me?"

"Well, it's a long story. Of course, much of it is her fault. She shouldn't have done it. But there are others, too. They wanted to use her to get at Okabe."

"Oh," says the hostage. "That's sad. I sorta thought we ought to be friends."

"In a better world, you would be." The angel sighs a weary sigh.

"What's wrong?" asked the girl.

"There are many people to blame for this, Mayuuri. There's Moeka herself, of course, but she never wanted this. There are very bad people who used Moeka, too. You can blame them a lot. There are people using the

bad guys, and they're actually trying to make the world a better place, and it might even work. And these people were good people, once."

The angel pauses.

"Go on," says the hostage, patiently.

"And then there's me, and I'm trying to use the bad people, to help make good things happen instead of bad things. And that means people get hurt, and I know that they're going to get hurt. Tonight, the people getting hurt are you and your friends. I could have stopped them, but I didn't, because then I couldn't save the other people."

"Oh," said the girl, and paused. "You're an angel. You have to . . . save everyone, I guess. I understand."

"And you're too kind," says the angel, looking down at her feet, ashamed.

"And I know you're too kind, that I can tell you everything, and you'll say it's all okay. And I tell you it anyway."

"Hey now. You're a good person. I can tell. And I know it's not just because you look pretty. And you care. And you told me. I forgive you." Mayuuri leans over and gives the weeping angel a hug.

"I know," says the angel, "just as I know that I don't deserve it."

"Well, I would offer an Oopa pillow if I had one," notes the hostage, "but I don't have one, so it had to be me."

The angel nods. "Of course. Thank you."

They sat quietly a few moments.

"So is this heaven?"

"Oh, no," says the angel. "This is just a vision. I usually can't do these, but you're a special exception. As a matter of fact, you're not dead yet, though you are very, very close."

"Oh," says Mayuuri. "Then what am I doing here?"

"I brought you here," says the angel, "for a few reasons. The immediate one is that you need more time than you have. The one that is closest to my heart - well - well, we have something in common, you and I. I once had a friend, a very best friend, who loved me and cared about me very much, and would do anything to keep me safe. You have one too."

"Okabe?" inquires the girl. "I know he's a very good friend. I hope he's okay, and that he doesn't get shot too."

"Your friend is like my friend. He loves you and cares about you very much. He would throw away his life to save yours, in the blink of an eye. He would walk through Hell again and again and again. He would ruin his life for you, many times over."

The girl in the blue dress **blushes** and looks away.

"That's... stupid. I don't want him to die. Even for me. Why would he do something like that?"

"Because he cannot bear losing you, and because he would blame himself. Even when it's not his fault. Oh, he was reckless, yes, but it's more my fault than it is his fault."

Mayuuri kicks at the ground, but there's not actually anything here besides these tow, so she kicks the nothing instead.

"You're like him too. You care about your friend a lot, and you would blame yourself if he got hurt, even though you are *more* blameless. You would be very brave for him. You would die for him too, if you had to. You want to protect him."

"Yes," declares the girl. "I... I'm just not very good at it. But he's taken good care of me. And now... I'm about to die, aren't I."

The angel nods.

"There is a way", says the angel.

"How?"

"I'm afraid I can't *tell* you, not exactly, or it won't work. But I can help you to the start of the path."

2.4 Part 3a.

/Your wish has overcome entropy,/ begins the creature, but Mayuuri is already moving, screaming -

2.5 Part 3c.

The floor is doused in red blood, and the room glows with a red light, and at the center of it all is Mayuuri, hovering in the air, a foot above the ground. She is not dressed in her sundress, but a maid costume, with many frills, a pocket-watch at her side, and it is all the same red as the blood on the floor.

Okabe is not sure if he's ever seen Mayuuri wear red before. On some academic level he supposes he probably has, but she favors the light blue. Maybe once as part of some cosplay?

Her hair is no longer than usual, not at all like the wig she would use at Queen May's. (*Lone observer, do you remember Queen May's?*)

(*Well, you shouldn't, because it never existed in this version of Akihabra. Are you cheating? Do you have a save-file editor?*)

And the mad scientist is now very confused, so he calls out.

"May - Mayuuri?"

The cat-girl's ears twitch, and she turns to face him, with a **hiss**. Okabe jumps back in surprise, and she *pounces* but not on Okabe, on the Organization operative behind behind him, just in front of Daru (who is lying on the floor). Now there is another scream, mixed with the ugly gurgle of blood.

Suzuha, to her credit, still has her wits about her, her foot against Moeka's neck, but she is agape.

3 Entropy Divergence

3.1 Part 3d.

"I've finally lost it," said Okabe to Daru. The pair of them have scrambled over to a corner. "None of this is real, is it. They're going to take me away, to the funny farm."

"Don't say that, dude. If - if that's the case I'm just as screwed as you are, and I will *not* look good in a size-84 straitjacket."

The red light faded, and there was a familiar giggling.

The assistant's voice. "May ... Mayuuri? Is that you?"

"Mmm-hmm! You're all better meow. I'll go get Okarin. Okarin!!!"

Drawn by her voice, he stumbles to his feet, still trying to piece things together. The hostage is still a catgirl maid, but the terrible *red* is gone, replaced with sky-blue frills. Mayuuri blue.

Kurisu is still "How are you - what happened? You were hurt ..."

"Well, Meoweka shot me, but I became a magical girl so I could save all of you guys!"

Daru stared. "Magical ... catgirl ... mayuuri? M... m..."

This would prove to be the impetus to get Kurisu back on her feet. "... Daru, I swear, if you say one word that is less than perfectly appropriate I will relieve you of your spine. Is that clear?"

"But we need to get going really soon meow. There are probably more of bad guys waiting outside just in case one of us tried to escape, and they might call for backup."

"Do we need to take the time machine?" asked Kurisu.

"It's too much. We can't possibly carry it all. Just ... take the important pieces and ... destroy the rest," declared the mad scientist. "We'll burn down the lab to destroy the evidence."

"Gather what you can, then," said Suzuha. "I'll go hot-wire a car."

3.2 Part 4a.

"We've met online before, you and me," said Suzuha, loading the partially disassembled microwave into the hatchback. "I post as John Titor. I'm a time traveller."

"I hid my posts in plain sight," revealed the mad scientist...

3.3 Part 4b.

Suzuha drove the car and explained at the same time.

"By the year 2036, the UN was dissolved amidst a full-out nuclear war. The Emergency Defense Committee which replaces them immediately began to stamp out dissent. Democracy is nothing but a memory. People sleepwalk through their lives, completely devoid of hope. Opposition is treason... and treason is death. At the heart of the Council's reign of terror is a shadow organisation, the true world government, pulling the strings. Their ultimate trump card: the time machine. Their research arm is known to the public as SERN."

"Nuclear war..." said Kurisu, in shock.

The cat-girl-maid took her hand, wordlessly. She contemplated the empty space in front of her with a distracted, thoughtful look, one which would have been more characteristic of Okabe.

"A war arranged by the shadow organi-" she paused. "Okay, everyone, stay calm."

"What's wrong?"

"Enemy ahead. But they don't know we're in a car, so they might looking for us yet. Just play it cool, don't try to look."

They passed a van, and turned the corner.

"MSY Deliveries?" asked Daru. "But they're all over town..."

Suzuha nodded. "One of the organisation's oldest fronts. They do real deliveries, but there are ties to the Yakuza. I'll take a detour, make sure they can't follow us."

She slowed, turning the van down an alley - then stopped, and shifted into reverse.

"Oh... oh, shit."

"What's wrong??"

"totally screwed we're *totally screwed*."

3.4 Part 3a.

Ordinary observations do not usually merit the invocation of FTL communications before being processed and summarized: it's simply inefficient, and physics is a harsh mistress. Waste not, want not! However, even a routine contract report (message format TS34507012XX) goes out directly over FTL channels, as a powerful channel to timeless hyperspace is already open in these circumstances.

Like other FTL message formats, a contract report opens with a full four-dimensional reference frame coordinate address. This is a variable-length code; in our present universe, some 13 billion years young, it only takes a couple of kilobytes. The FTL communications node itself, does not experience time; the code in the spacetime stamp alone preserves the ability to sequence messages over the lifetime of the universe and construct a reference to the data without the expense of an infinitely complex computation.

In human terminology, the report went something like this.

"Candidate «Shiina Mayuuri» was identified by a sudden potential spike on the order of 298ρ coincident with an assault on the building which she occupied. Observation was immediately dispatched, discovering an organized crime group. The candidate was confronted with violence by noncandidate «Kiryu Mokeka» in association with the attackers. The activation of this emotional bond resulted in an increase in candidate potential to 380ρ as candidate's body was damaged by small arms fire. Candidate's body was examined by an associate, ineligible «Rintarou Okabe», resulting in a potential spike to 701ρ . Violent confrontation was escalated by noncandidate «Amane Suzuha?» with no impact on potential, providing an opening in which candidate could be approached. Due to the anticipated potential harvest and the forecast of imminent death of candidate's body, an expedited telepathic approach was applied with level 3 safeguards disabled, consistent with standards for these candidates."

"«!!!» Candidate interrupted telepathic preamble with nonverbal wish response expressing concern for her friends. The ensuing resonance cascade resulted in the collection of realized potential in excess of the $1e6\psi$ measurable by instruments as configured. Recommend an audit to confirm full integrity of Node 1 at earliest viable opportunity."

A full audit would cost most of the potential collected from a very weak contract - the karmic potential stored in the node being unsuitable for this sort of analysis. And the incubator would keep the channel open for a while, incurring additional expense. But for over $100,000\psi$, and understanding besides? A bargain.

A few seconds later, he added the first follow-up note. "Expedited soul gem extraction was necessary. Follow-up counselling will be provided as feasible and further monitoring of anomaly «Shiina Mayuuri» and her associates will continue. If sympathetic potential resonance promotes more associates of anomaly «Shiina Mayuuri» to Candidate the rewards may be substantial."