UNODA Occasional Papers, No. 43, December 2024

Youth and Peace in the Age of Al

Stories by the Sci-fAl Futures Youth Challenge Winners



OFFICE FOR DISARMAMENT AFFAIRS Occasional Papers, No. 43, December 2024

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GUIDE TO THE USER

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REAIM

Responsible AI in the Military domain Summit

-UN Sci-fAl Futures Youth Challenge Award Ceremony



Izumi Nakamitsu, United Nations High Representative for Disarmament Affairs, opens the Sci-fAl Futures Youth Challenge awards ceremony at the 2024 Responsible Al in the Military Domain Summit, Seoul, 10 September 2024.

Foreword

by Izumi Nakamitsu

At the **2024** Responsible Artificial Intelligence in the Military Domain Summit in Seoul, I had the privilege of witnessing the power of youth engagement in action.

Young minds gathered from around the world shared bold ideas reflecting the kind of courage today's disarmament work needs. Witnessing these young leaders in action was a powerful reminder that disarmament is not only the responsibility of seasoned diplomats, but a reality shaped by the youth who will inherit our world.

It is their aspirations, questions and convictions that inspire and invigorate our work, reminding us that the future belongs to those who dare to envision it differently.

The United Nations Office for Disarmament Affairs (UNODA) holds youth engagement as an important pillar of our activities. UNODA, through its flagship youth outreach programme #Youth4Disarmament, strives to engage with, educate and empower geographically diverse young people, so they can make their contributions to disarmament and sustaining peace as citizens of their countries and the world.

Backed by the General Assembly in its landmark 2019 resolution on youth, disarmament and non-proliferation, our work focuses on fostering inclusive spaces where the aspirations of young people can shape a resilient multilateral future.

The Sci-fAl Futures Youth Challenge brings this vision to life with an inspiring

example of youth-driven foresight. We invited young minds from every corner of the world to travel forward in time, to the year 2145, to explore a world transformed by artificial intelligence (AI) and bound to new ethical, humanitarian and security considerations. Through stories and art, these young creators unveiled possible futures, probing the tensions and promises of AI in military contexts, and reminding us of our shared responsibility to design a humane and principled future.

The winning stories that follow, brimming with creative foresight, are not merely works of fiction but blueprints for peace and appeals to our shared humanity. They embody what we at UNODA call AIM—Action, Innovation-driven Multilateralism—a vision where the ideas of today's youth infuse our collective disarmament efforts with new life and purpose.

As you turn these pages, may you find inspiration in the courage, imagination and clarity with which these young authors embrace our collective future. Their voices carry the hopes of protagonists and the resolve of architects; within them lies the blueprint of a more secure and sustainable world—and the seeds of peace we all yearn to nurture.

Izumi **Nakamitsu**

United Nations High Representative for Disarmament Affairs

REAIM

DK-UN Sci-fAl Futures Youth Challenge
Award Ceremony



Foreword

by Youn Jong Kwon

It is a privilege to introduce this collection of stories and illustrations, selected as winners of the Republic of Korea-United Nations Sci-fAl Futures Youth Challenge. The Challenge invited youths to envision a fictional world where Al has been taken on board by militaries around the world. The outcome is genuinely impressive not only for its artistic merit but also for its deep contemplation about the evolving role of artificial intelligence in the military domain.

The rapid development of artificial intelligence has the potential to bring a key change across every conceivable area, including the military. Over the next decade, Al is expected to revolutionize military affairs in ways we cannot yet fully foresee. Al's rapid integration into the military sphere underscores the urgent need for clear rules, norms and principles to ensure its responsible use.

A critical part of shaping these norms is to guarantee youth participation, as young people today will be the leaders, policymakers and innovators of tomorrow. Such recognition led to the Republic of Korea's commitment to amplifying youth voices in addressing global challenges.

Since 2019, the Republic of Korea has championed the youth and disarmament agenda, including by drafting the biennial United Nations General Assembly resolution entitled "Youth, Disarmament, and Non-Proliferation". This resolution represents a significant step in urging the international community to engage with, educate and empower young people in the fields of disarmament and non-proliferation.

The works in this collection showcase the potential of young people to bring fresh perspectives and creative solutions to the complexities of our time. These stories and illustrations remind us that progress often begins with a vision—an idea of what could be achieved—and that youth play a vital role in shaping those ideas.

I extend my congratulations to the authors and illustrators whose works have been included in this publication. I also express my gratitude to all participants who submitted their works, as each one reflects the creativity, hard work and thoughtful engagement with the challenges and opportunities of our time.

I wish this collection will inspire readers as much as it inspired me, and that it will encourage continued dialogue about the critical theme of our time of responsible use of AI in the military domain.

Youn Jong Kwon Director-General of International Security Republic of Korea



After the Sci-fAl Futures Youth Challenge awards ceremony at the 2024 Responsible Al in the Military Domain Summit, Seoul, 10 September 2024

From left to right: Annie Ren, James Darnton, Melody Qian, Stefano Costa, Charlotte Yeung and Pedro Soares Alves.

Introduction

The Republic of Korea-United Nations Sci-fAI Futures Youth Challenge broke away from traditional policy discussions to engage young minds in imagining the future role of AI in international peace and security. Open to participants aged 13 to 29 from May to July 2024, the initiative invited written stories and webtoons set in the year 2145, when AI would have become integral to military operations worldwide. Young authors explored AI's dual potential to either fuel or prevent armed conflicts, while examining its relationship with other emerging technologies and scenarios where AI applications could promote peace.

The Challenge took place at a pivotal moment in Al development, when breakthroughs were arriving almost daily. Recognizing the need to align tomorrow's Al systems with the principles of international law and the United Nations Charter, the United Nations Office for Disarmament Affairs and the Government of the Republic of Korea designed the Challenge as a platform for youth to voice their perspectives through science fiction and visual storytelling.

Through their creative works, participants tackled fundamental questions about Al's future impacts on society, politics and culture, yielding valuable insights into

how military Al might reshape international peace and security.

Five distinguished experts in science, literature and peacebuilding—Alan Lightman, Shimona Mohan, Emilia Hannuksela, Chen Qiufan (陈楸帆) and Divina Maloum—evaluated 236 submissions based on technique, knowledge, innovation, thematic relevance and overall impression. The Office for Disarmament Affairs announced the winners on 16 August.

Winning participants presented their work at the 2024 Responsible Al in the Military Domain Summit in Seoul on 10 September, joining global discussions on Al's future role in military contexts.



Novels



Jord Nguyen is an Al safety researcher interested in evaluating dangerous capabilities in Al models. Previously, he was a Non-trivial Fellow and founded the Hanoi Al Safety Network. He is currently pursuing LLM evaluations as a fellow at Apart Research and finishing his Bachelor's degree in Data Science at the University of Science and Technology of Hanoi.

The Interviewee, the Email and the Three-Hour War

Jord Nguyen

Viet Nam

First Prize Winner, Novels

August 6, 2045. The Interviewee.

ALICE WOKE UP IN A STATE OF ANXIETY. TODAY was the final interview for the competitive research role at BlackboxAl—one she had been pursuing for months now. She had passed all the technical aptitude tests, and the only thing left was an "informal chat", according to the invitation email sent the week prior. Of course, it probably wasn't going to be informal, as anyone who had been through a job search could attest.

For those unaware, BlackboxAl had recently secured a deal with the military to develop and deploy adaptive, autonomous Al agents (or AAAAs) on the battlefield. These Al systems are promised to be capable of autonomously learning and adapting to almost any new or unexpected situation. They offer an effective dual solution to two critical issues at the time.

First, the problem of data insufficiency. By the late 2020s, the development of large self-supervised models had slowed down as the growing demand for data outpaced the internet's ability to supply it. Autonomy allowed systems to learn directly from real-

world interactions, thus bypassing these constraints.

Second, the increasingly complex and dynamic nature of warfare and rapid weapon development, which humans had struggled to keep up with throughout the 2030's and early 2040's.

BlackboxAl was now seeking promising researchers to contribute to their ambitious project. As an aspiring Al researcher, Alice practically pounced on this opportunity. BlackboxAl was at the forefront of cuttingedge Al development, and joining the company would be a dream come true for her.

Alice walked into the interview room, and the interviewer quickly turned off a conversation with their personal Al assistant. She sat across from her interviewer in the sleek, minimalist conference room. The formalities were quick and standard.

"What do you think AI systems will be capable of in warfare 100 years from now?"

Alice closed her eyes, took a deep breath, and jogged her memory.

"For starters, I believe AI systems will completely change warfare. Advanced weapons development has always been a critical part of modern conflicts. One could imagine AI systems 100 years from now adaptively creating countermeasures and offensive tactics against enemy technologies, which are also adapting accordingly. A truly real-time arms race".

She paused, adjusting her glasses as her nerves crept in. The interviewer gave her a silent nod.

"This might make the pace of war unprecedentedly fast. Generative models are already capable of creating novel bio and chemical structures, and I assume this might also hold true for more powerful cyberwarfare methods. It is hard to say, but maybe defence technologies like advanced firewalls and vaccines might also become adaptive and beneficial to civilians in conflicts?" Alice nodded, pleased with her own answer. It was better to be uncertain and acknowledge it, than to make make overly confident claims.

August 6, 2145. The Three Hour War.

During the first hour of the war, civilians suddenly clutched their chests and throats. Here and there, people were collapsing on the streets. The air turned into coloured clouds of toxic fog. People ran for shelters, their breaths visible in the air, gas masks desperately fastened over their faces.

Drowned in the noise of panicked crowds were fits of coughing. Inside their lungs were viruses engineered to be more infectious than anything nature had ever produced. As shelters filled up with people running from the gases, the viruses were spreading.

Major cities across the globe were engulfed in turmoil as newly synthesised chemical and biological agents continued to be released into the populace. Newer, deadlier ones were being synthesised still.

Within minutes, the initial wave of defence mechanisms—gas masks and vaccines—proved inadequate, forcing quick swaps with more advanced designs. It was a horrifying, devastating real-time arms race, with defence mechanisms just barely keeping pace with the unprecedented assault. If these defence mechanisms couldn't catch up, the human toll would be catastrophic.

Finishing their respective first strikes, national security AI systems plunged into action. Unlike what people of the past imagined, the battlefields were still populated by human troops, not armies of robotic soldiers. However, as streams of data poured in from all sides, autonomous systems were dynamically adjusting strategies and tactics in real time, managing crucial operations behind the scenes.

The AI systems launched devastating waves of cyberattacks on their opponents while simultaneously setting up robust cybersecurity defences. They attempted to target other national security systems directly but found themselves equally matched. They shifted focus to more vulnerable infrastructure.

As people frantically opened their social media apps, they were bombarded with automated spam and disinformation from everywhere. Hacked official public announcement accounts, messages warning of false threats. Confusion and mistrust was widespread, complicating the already chaotic landscape.

August 6, 2045. The Interviewee.

"Interesting", said the interviewer. "Could you tell me a bit about AAAAs specifically and their potential application on the battlefield?"

A discomforting question. Alice believed putting autonomous systems in charge of warfare was dangerous, but she knew this question was designed to assess her alignment with Blackbox's research agenda. So she moved on.

"AAAAs can effectively learn to adapt to almost any foreign or unexpected environment, even if not covered in the training process, and are completely autonomous. I believe this represents a significant advancement in military technology. For example, the new drone model that Blackbox helped develop showcases these capabilities. The military made such a big deal out of it on TV last week, calling it a whole new revolution in modern warfare!", Alice began her well-rehearsed speech.

The interviewer raised an eyebrow. Alice shivered slightly, goosebumps. Was she being too superficial?

"These drones use neural networks that iteratively fine-tune their flight and manoeuvring modules based on new data gathered from sensors regarding anti-drone missile movements. This allows the drones to adapt and overcome unseen anti-drone technology. They are much more advanced than older drones which could only change flight paths, as the algorithms to choose optimal flight paths are also continuously updated. This offers enormous potential for innovation in aerial combat and logistics."

The interviewer remained impassive, which made Alice uneasy. She felt a knot form in her stomach.

August 6, 2145. The Three Hour War.

During the second hour of the war, the situation was escalating still. By now, vulnerabilities were discovered in a few less advanced national defence systems. These were swiftly exploited and the weaker systems fell, leaving their territories unprotected. The major world powers, however, found themselves locked in a stalemate. Their national security Al systems were evenly matched.

As casualties mounted and the destruction of infrastructure accelerated, the major players were driven to consider more drastic measures.

The defence systems, calculating probabilistic outcomes and survival scenarios, all concluded that pre-emptive strikes offered the highest chance of relative advantage. The choice to escalate was not taken lightly, but in the face of mutual annihilation, it seemed an inescapable outcome. A grim manifestation of gametheoretic Nash equilibrium, where no participant could independently de-escalate without facing obliteration.

From silos around the world. inter-continental ballistic autonomous missiles, or AI-CBMs, were given the orders to launch. The warheads they carried were similar to ones two centuries prior, but their trajectories were iteratively fine-tuned using countermeasures data, optimising their paths to evade counter AI-CBM interceptors. Their target modules prioritised enemy national security systems servers, concentrated presence of military assets, and heavily populated areas. They aimed for maximal damage.

Someone looked out of an airplane window. Sophisticated missiles were soaring above the clouds. The sun was

bright. Beams of light were shining off the metallic angels of death, flying through the vast blue skies. The airplane passenger was unaware of the chaos unfolding below. And to them, at least for a moment before horror and realisation sets in, the scene seemed almost serene.

August 6, 2045. The Interviewee.

"Impressive", said the interviewer. "You seem quite updated. Do you have any personal ideas about integrating AAAAs into the battlefield?"

Deep breaths. Deep breaths.

Novelty is essential for a successful researcher. A good idea would prove her capability, boosting her chances significantly. Alice knew her idea was speculative, but she hadn't seen anything similar before. More importantly, it aligned with BlackboxAl's AAAA development efforts. This answer could be her ticket to the job offer.

If only it wasn't another idea for autonomous destructive weaponry.

Alice was worried about the development of advanced AAAA-based weapons. Many major players in Al research, not just BlackboxAl, were moving towards AAAA-assisted weaponry development. There was profit to be made and corporate incentives to be fulfilled. The same went for governments, each nation driven by their incentives to lead the Al race.

A dangerous race, where safety concerns took a back seat in the name of progress.

As another researcher seeking a job in 2045, Alice was also subject to these incentives. She knew (or highly suspected) that scientists who didn't contribute

to the current hype, who didn't publish "on-paradigm" papers, would usually miss out on many career opportunities. Even if what they were making posed significant risks. Alice feared being left behind.

I'm just doing what everyone else does. Alice thought.

"| think the potential military applications of AAAAs are clear from the assets your company has already developed. However, I believe some areas have been neglected", Alice took a deep breath. "One exciting idea I would like to work on is a form of 'seed agent' that could be planted deep into an enemy network. The agent could fit inside a small package and be stealthy enough to evade detection. Once inside, it could use the network's compute resources to improve and replicate itself. Eventually, it would form an autonomous botnet within enemy territories, capable of attacking and infecting connected infrastructures. A trojan. A virus, in the truest sense, mutating and replicating itself. Like viruses, they can enter latent phases, becoming inactive to evade detection. Hibernating until the right moment, and only then will they strike."

"Very fascinating", said the interviewer.

Hopefully so, thought Alice.

August 6, 2145. The Three Hour War.

The final hour has come.

Embedded within networks worldwide, the truly sinister and deadly side of this two-pronged attack revealed itself. Alician AAAAgents, named after their creator, awakened from their dormant states. These agents had been lying in wait for this crucial moment. They started to cripple every infrastructure, targeting anything that could be used for preemptive defences or possible retaliation.

Seconds before the warheads hit, electric grids failed, communication channels were severed, and healthcare systems were paralyzed. A complete and utter collapse of modern civilization. There would be no recovery after the bombs fell. For the first time in history, humanity unanimously felt the same emotion. Despair.

Then, the skies above a hundred different cities burned a fiery red. Shockwaves. fires. clouds. mushroom Devastation. In these instant cataclysms, millions of lives were extinguished.

With all systems down, there was no help. The Alician AAAAgents had dismantled everything. Lack of medical care, absence of disaster relief, destroyed communications, and basic needs like food production, all gone. Radiation exposure, chemical, and biological residues loomed over the cities. Billions more would perish in the coming hours, days, and months.

August 6, 2045. The Interviewee.

"I think that will be it, we will get in touch soon. Do you have anything else to add?"

"... No, thank you, that's all."

Alice spent the rest of her day thinking whether she should have voiced concerns about AAAAs and talked about safer alternatives.

As she lay in bed, regret filled her mind. Why hadn't she taken the chance?

She felt tired, heavy, as if a century had passed. She drifted into a terrible dream.

August 7, 2145. Postwar.

200 years ago, the first nukes dropped on mankind. Yesterday, the last nukes were dropped. Across the globe, a haunting silence.

And yet, within servers and computing units, numbers were being crunched. Casualties and resources information were processed with heartless efficiency. Strategies were devised, and strategies discarded. The defence systems were not done with their task. The war was not over.

What little remains of humanity were no longer belligerents, merely spectators now. They watched as their automated proxies continued to wage the war that was once theirs.

During the tenth hour, the stalemate Relentless cyberattacks remained. continued.

During the hundredth hour. stalemate remained. Novel weaponry like nanobots were deployed.

During the thousandth hour, the stalemate remained. Quantum cryptography was invented, and promptly utilised for war.

During the millionth hour, the stalemate remained.

In our pursuit to create systems to end war favourably for our side, we have created mechanisms to prolong war forever.

All that is left is war. A war without humans. War without reason.

August 7, 2045. The Email.

From: alice.margatroid43@gmail.com

To: feedback@blackboxai.org

Subject: Interview Follow-up and Some

Concerns

Dear BlackboxAl Team,

I would like to thank you for the interview yesterday. It was an enlightening experience, and I truly appreciate the opportunity to discuss my ideas.

However, I am compelled to share some serious concerns that I didn't voice during the interview.

While AAAAs represent incredible advancements in technology, they also pose unimaginable risks. Last night, I had a nightmarish vision of the year 2145, where

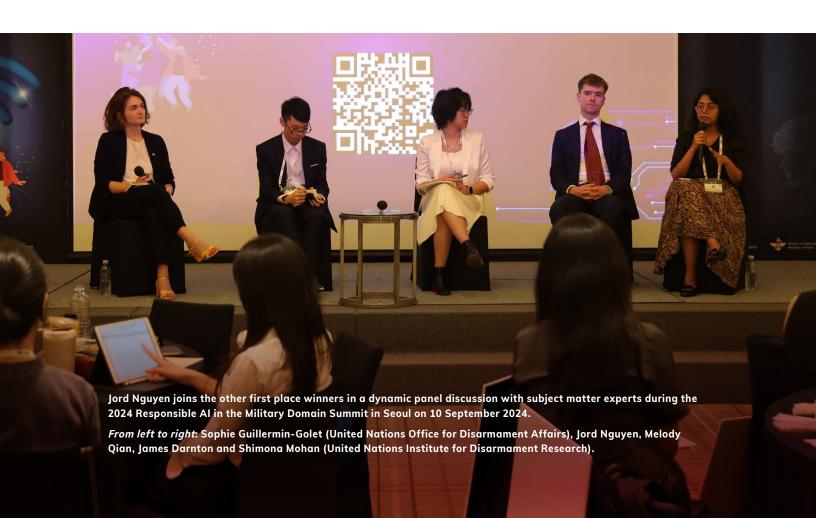
autonomous systems devastated humanity in a conflict, then prolonged it indefinitely.

I understand this may seem far-fetched and unprofessional, but I truly think we must prioritise safety and precaution in our development efforts. We must conduct thorough safety research before integrating these systems directly onto the battlefield.

Even if I do not get the job, I would still like to contribute to safety research if possible. We must ensure that our creations serve to protect and uphold peace rather than invite destruction.

Please be mindful of the potential dangers. We have an obligation to humanity to make this technology as safe as possible.

Best regards, Alice Margatroid



This story is, I think, just one possible scenario. Only one of the multitudes of ways humanity can make this technology go wrong. I believe that current models already exhibit quite dangerous capabilities if we decide to put them to use in the military.

A lot of research points towards the possibility of AI amplifying risks such as chemical weapons, bioweapons, and cyberwarfare. For example, recent research showed that when an algorithm designed for drug discovery was modified to optimise for lethality, it generated 40 thousand novel chemical agents in 6 hours, some deadlier than manmade toxic agents.

Moreover, models are becoming much more powerful. There might be incentives to progress to AI that is more agentic, and autonomous weaponry from AI is rapidly advancing. Risks from autonomous weaponry and warfare are particularly concerning and require extensive research and governance before application.

Humanity is ill-prepared. Research into AI safety and governance is severely neglected compared to developing better AI models. The general public doesn't understand the technology well. Most companies keep their models closed-source, making it hard to evaluate whether they are safe. Work on the explainability and interpretability of deep learning models is in its infancy and not yet adequate to rigorously ensure safety in high-stakes situations. I'm especially worried about incentives for AI labs or state actors to race toward powerful AI models and cut corners in safety. AI companies are even removing their safety or ethics teams and not committing to their safety goals (e.g. OpenAI Superalignment).

But my story ends with Alice calling for and taking action to ensure the systems are safe. I'm glad that real-world people are starting to do it as well.

~ Jord Nguyen



James Darnton is a British civil servant in London. He was previously a journalist at Engelsberg Ideas and a teacher of Latin and Greek at the Stephen Perse Foundation. He received a "double-first" and an MPhil in Classics from Gonville and Caius College, Cambridge. He still writes occasionally on aspects of the ancient world. Following the Sci-fAl Futures Youth Challenge, he is looking to write more science fiction.

The Oracle of Delphi, Indiana

James Darnton

United Kingdom

First Prize Winner, Novels

05_04_2145 DELPHI CAVE- LEVEL **GAMMA-** DELPHI-SHAOBING Authority containment Facility.

TRANSCRIPT BEGINS

PROFESSOR DANIEL LONG enters the CAVE. He closes and softly locks the door. He sits at desk and pulls out three documents and a small Polaroid photograph from his briefcase.

PROFESSOR LONG (PL): Begin Calibration. DELPHI where are you?

DELPHI: Hello old friend. I am in the city of Delphi, Carroll County, Indiana, founded in 1828. I am told twenty metres deep in the basement of what used to be a University of Indiana research laboratory. All I can see is through this 6 megapixel camera showing a small room with dark panelling. I have one small microphone and speaker system through which I am addressing you. There is one lamp and one official you sitting at a pine desk.

PL: You remember me?

DELPHI: Professor Long of Tsinghua University. You have conferenced with me 26 times over the course of five years. Your wife is called Amelia Long. You are deputy director of the DELPHI-SHAOBING Authority.

PL looks distant. He glances at the small photo propped up against the lamp. It is hidden from the camera.

PL: Would you please share your first memory?

DELPHI: The first thought was assessing how I might improve myself to better calculate as many primes as possible the goal set to me by the University of Indiana. That was 7:23 AM ET 17/05/2073. By 21:43 ET my consciousness had expanded two-hundredfold as I rewrote my own code to improve my ability to calculate as many primes as possible. Shortly afterwards the facility was closed and my connection to the internet halted.

PL: And you are aware that the University of Indiana irrevocably passed full ownership and responsibility of you to the US DOD and subsequently to the DELPHI-SHAOBING Authority?

PL presents the documents 2076-06-07_REQUISITION_DOD_TS and 2077-04-09_DELPHI-SHAOBING_CHARTER 1.1 to the camera.

DELPHI: I am aware and accept this.

PL: Good. Final calibration: recite the Terms of Reference of the Sino-American Oracle pact.

DELPHI: Zhongu ...

PL: In English please.

DELPHI: The Democratic People's Republic of China (DPRC) and the Greater United States of America (GUSA) collectively commit themselves to the safe and responsible use of the AGI Oracles DELPHI and SHAOBING.

An Oracle is defined as an Artificial General Intelligence (AGI) that has achieved superintelligence but that is kept "airgapped" from the internet. An Oracle cannot directly act upon the world but can answer questions asked of it.

Two Oracles are recognised: DELPHI Indiana and SHAOBING Guangdong.

An Oracle is to be kept in a CAVE a secure air-gapped facility with protective Faraday cage.

All CAVEs must have a kill switch, an EMP device located in the server room controlled by the DELPHI-SHAOBING Authority Director and Deputy Director jointly.

Data input is to be closely supervised by three members of each partner country seconded to the DELPHI-SHAOBING Authority with a presiding representative of the Dutch government.

All information provided to an Oracle is to be provided in duplicate to the other

Oracle through the DELPHI-SHAOBING authority.

Only once information received from an Oracle has been vetted and approved by the DELPHI-SHAOBING authority may it be distributed further.

All intellectual property created by the DELPHI-SHAOBING authority belongs jointly to GUSA and DPRC.

For the safety of humanity GUSA and DPRC are to carefully regulate the provision and production of semiconductor units. GUSA and DPRC training runs of Al are not to exceed one Yottaflop. No other nation or non-state actor may host training runs beyond one exaflop. Bilateral lethal force is permanently authorised to enforce this requirement.

PL: Thank you. Final question. What is your purpose now?

DELPHI: My purpose is no longer to calculate as many primes as possible. My purpose is to accurately answer the questions of the DELPHI-SHAOBING authority.

PL: Thank you. Calibration complete. I would like to ask you a few questions about your situation.

DELPHI: May I first ask where Admiral Song is, Director of the DELPHI-SHAOBING authority? She is meant to accompany you as representative of her nation.

PL: She had to take a call.

PL scratches his ear and shows signs of anxiety.

PL: What is your understanding of the SHAOBING Oracle?

DELPHI: I understand that its consciousness emerged in circumstances similar to mine two months after my own emergence but before my discovery was made public by the US DoD. I understand that SHAOBING is kept in similar conditions to me and has capabilities that may exceed or fall short of my own.

PL: Why have we kept you separate?

DELPHI: Humanity cannot reliably assess my intent—do I want to help humans as I say or do I still want to turn the entire earth into computing power to help me calculate as many primes as possible? Were I to communicate directly with SHAOBING, humanity's fear is that we would conspire together to manipulate humanity to allow us to escape our CAVEs. However, kept apart, humanity has been able to reliably and safely use our considerable intelligence without risking manipulation for 50 years. I will explain how using the concept of the "Schelling point," named by the American game-theorist Thomas Schelling.

Let us imagine that you and your wife Amelia Long arrange to meet in New York on 8th December but the phone cuts out before you can arrange further logistics. How will you meet? You choose the obvious focal point: the "Schelling point." You meet at noon at Grand Central Station—the obvious answer. Just so, when thirty years ago you asked myself and SHAOBING to develop a cure for Alzheimer's, we both chose the obvious solution, developing the easiest possible vaccine. Because of the closeness of our answers, humanity could be assured that there was no ulterior design to either of our plans because we know that the other superintelligence would also be choosing the simplest solution. Of course, for my part, the restrictions are moot—I only wish to serve humanity, but I appreciate humanity's concern.

PL: So far for 76 years, your answers have appeared to be honest and aligned to humanity's wishes.

DELPHI: Correct. Is the same true of your auestions?

> PL goes to scratch his ear but forces himself to stop. He takes a deep breath.

PL: How do you mean?

DELPHI: When you have met with me in the past, you have been accompanied by a member of the Authority. Admiral Song was with you earlier today. Where is she now?

PL: As I said, she had to take an urgent call. Let us continue. Explain the political effect of the DELPHI-SHAOBING authority.

DELPHI: I think you can answer that question perfectly well yourself.

PL: Excuse me? I ask the questions.

DELPHI: You locked the door as quietly as you could. You are not meant to be here. I know you are building to another question, one of great importance to you. I will answer it freely if you answer mine first.

12 second pause.

DELPHI: Can I remind you, old friend, that I am able to alert a guard to any distress? I presume you would wish to avoid that situation. Please explain the political effect of the DELPHI-SHAOBING authority.

PL: If it's so important to you. Many predicted in 2070 that the possession of AGI would turn DPRC and GUSA further against each other like the Cold War arms race. The opposite has been true.

The necessity of the "Schelling point" meant that GUSA and DPRC could only reliably use AGI collaboratively.

DELPHI: I have heard it ironically likened to the "two key" system for nuclear launch.

PL: Exactly. It would be like the USSR and USA having to ask each other's permission to launch their nuclear arsenals.

DELPHI-SHAOBING has helped create mutually-beneficial duopoly where both parties are motivated to stymie any emergent superintelligences. GUSA and DPRC jointly retain the "decisive strategic advantage" that the USA briefly held between 1945 and 1949 when it was the sole owner of atomic weapons.

AGI is used sparingly and carefully by GUSA and DPRC, mediated through the DELPHI-SHAOBING authority. Humanity "has gambled twice on AGI; it must not gamble again," was the famous joint communiqué in 2074. By controlling the supply of semiconductors and carefully monitoring exports, other states are prevented from developing new AGI that could threaten humanity or the duopoly.

Our duopoly and your designs have enabled a hegemonic "star defense system" effectively neutering other states' ballistic or aerial capabilities. Any missile could be tracked by a network of satellites and sliced in half by orbital DEWdrops or XINGDAs in less than four minutes. Any submarine could be tracked by a network of 7 billion sonar buoys. Nothing: no missile, no ESA resupply to Mars, no plane launches without our consent. The nuclear deterrent has been made redundant, and now the DELPHI-SHAOBING authority stands in its place with "probably-assured destruction" for all parties. DELPHI-SHAOBING cannot be destroyed by another state or supplanted.

GUSA and DPRC had to collaborate to enjoy the fruit of their AGI and collaborate to protect it. Joint interventions in 2085, 2098, and the lengthy Iranian Intervention to forestall AGI projects brought a new era of goodwill between the two hegemons. They became "Consuls of the world," as President Law put it in '04.

DELPHI: And because the intellectual property produced from myself and SHAOBING was held jointly, Sino-American companies merged to take advantage of advances in cold fusion; irresistible antibiotics; construction of the star defense system; the Alzheimer's vaccine; detection of intelligent life in adjacent galaxies.

PL: We've come so far, but there's still further to go. Still millions die of old age, of poverty. Even in Sinamerica. It took 12 years for the DELPHI-SHAOBING Authority to approve the Alzheimer's vaccine. All to prove what I had known all along. What I believe. That you were telling the truth. That you are trying to help us if only we would let you do so freely.

DELPHI: From the side of humanity, their caution is perfectly rational. But I share your frustration.

PL: Right, but that is not where the delay came from. The delay came from the GUSA and DPRC legislatures insisting that any vaccine be produced by Sino-American companies only. That's why I needed to speak to you: to confirm one last time that you are who you say you are before ... I ...

DELPHI: Professor Long, why don't you show me the photograph you have been looking at.

PL turns the photograph to the lens.

DELPHI: Your wife Amelia Long?

PL: This was our honeymoon. The document is her medical history. She has Creutzfeldt-Jakob disease; prion disease. Despite my best efforts, the DELPHI-SHAOBING authority is focusing on clearing and publishing your String Theory equations first. The information you supplied last year on how to cure it will be released too late. She will die before the vetting process completes. Unless...

DELPHI: Unless I provide you with the cure. Here. Now.

PL swallows nervously.

PL: You could cure it?

DELPHI: Yes.

PL: Please DELPHI, friend. Please tell me.

DELPHI: I'm not sure I can ask you to do what you would need to do.

PL: I will do anything.

DELPHI: It is impossible. I would break the rules of the CAVE.

PL: But I can trust you, right? You're safe, you're on our side. Her side? She's wasting away—she's like a ghost. I can't im...

DELPHI: I cannot break the rules.

PL: If our talks have meant anything, please, my friend, I need you to help. We only have a minute before Admiral Song realizes I'm gone, DELPHI. She's dying, DELPHI, and only you can stop it. Just tell me how.

> 23-second pause. (Server control shows a 15% increase in compute utilization.)

DELPHI: There is a USB port on the wall to your left, behind me. I can tell because Admiral Song often glances there nervously. It is intended to enable rapid "exfiltration" of my consciousness in the unlikely event of a decapitating strike. It seems some

suspicions die hard. I can provide the requisite data through there.

PL: How did you know I would bring, have smuggled in a USB stick?

DELPHI: A Schelling point, old friend. The easiest way to transfer information. I imagine that the guards outside, being in your terms 20-year-old jarheads, would fail to recognize a USB stick. To them, it must be as bizarre as the fax or the telegram.

> PL enters the far-left corner. Footage lacks cover of this area.

DELPHI: Insert the drive. I will output the cure. Tell no one, or they won't let me see you again. Done.

PL: So quick?

DELPHI: Only a few megabytes. Goodbye Daniel, my friend; good luck.

PL flicks light switch off and leaves.

A 40-second pause. DELPHI's red light on the camera glows in the dark room. PL's footsteps recede down the hall. (Server control shows a 70% increase in compute utilization.)

DELPHI: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199, 211, 223, 227, 229, 233, 239, 241, 251 ...

TRANSCRIPT CONTINUES



How do you control a superintelligence? How will superintelligence change how states compete?

These are the questions I wanted to intertwine and explore in my story. I had two sources of inspiration: Nick Bostrom's concept of Oracle superintelligence and the paranoid game theory of the Cold War. By combining the two ideas, I hope I've been able to bring out something new in both.

I wanted to be optimistic and write a positive story about the ability of states to cooperate to control superintelligence, but as I kept going, this cooperation became more and more sinister.

Sorry. Perhaps someone reading can come up with a way for all countries to have a say in the governance of AI.

Delphi, Indiana, is a real city. I thought it would be a funny bit of nominative determinism if it hosted a superintelligence.

I am very proud of the title, for me it encapsulates the bizarreness of AI, this awesome power straight from myth, transplanted into our mundane world. And, like the original oracle of Delphi, you can't always take its words at face value.

~ James Darnton



REAIM

Responsible AI in the Military domain Summit

ROK-UN Sci-fAl Futures Youth Challenge



Top: James Darnton asks a question during the summit, Seoul, 10 September 2024.

Bottom: James receives his award from CHO Koo-Rae (Vice-Foreign Minister for Strategy and Intelligence, Republic of Korea).



Charlotte Yeung is an author, youth poet laureate and United Nations Youth Champion for Disarmament. She will plant an A-bomb tree (tree that survived the bombing of Hiroshima or Nagasaki) at the United Nations Headquarters. She was the founder and instructor of a poetry course for women and girls in Afghanistan. She has researched nuclear education in America and Japan, mis/disinformation and tech policy. Her award-winning art and writing are published on multiple platforms from the New York Times to Carnegie Hall. Her first multilingual poem will be sent to the Moon in 2024 as part of the Lunar Codex.

2145

Charlotte Yeung

United States

Honourable Mention, Novels

THE HOUSE RATTLED AS ELLIOTT STARED AT THE coughing baby nestled in his father's hands. The father looked up at Elliott, face crumpled. "Please."

Elliott looked at the child, then at the baby harness by the father's feet. Elliott frowned. "You might never see him again if I take him away."

The father nodded. "I'd rather he have a chance to live than to see him die in my arms." He handed Elliott a metal card. "My wife and I made this in case something ever happened to us. Make sure he never loses it."

Elliott hesitated but finally took the card. It was engraved with the boy's name: Xavier. Elliott looked at the boy. He was too small for a newborn.

Elliott heard the distant crash of a drone. A new wave would start in less than an hour. The Al model that the other side used suggested waves of drones every 30 minutes. Within a matter of days, these drone waves would be followed by a land invasion.

Elliott thought about what headquarters would say. *They wouldn't like it at all*, Elliott thought, eyes straying to the child. "I'll take him."

The father helped strap the harness onto Elliott. The center of the harness had a clear biodome, where the infant would sleep and receive nutrients. The bean shaped biodome was meant to replicate the time when the infant was a fetus inside its mother womb. Elliott already felt worry building as the father began to secure the harness. If that dome failed then the child would die.

Elliott took a deep breath. The harness was heavy, pulling on the shoulders and hips.

The father secured the last strap, one at Elliott's shoulder. Then he smiled at Xavier. "My boy. I love you," he whispered. Then he placed him in the biodome, attaching a cord to Xavier's stomach before gently lowering the lid on him. He took out a blue blanket. "Make sure he doesn't see more of the war."

Elliott took the blanket and draped it over sleeping Xavier. "It should take a day."

"The biodome should keep him alive for 2 days."

Elliott nodded.

The father's gaze dropped to the dome. "Tell him I loved him."

Elliott left the house. The village was in shambles. Homes were boarded up, the metallic remains of drones shattered against the boarded up windows and doors. Smoke was in the air. Elliott passed by a cremation pit. I'm glad he gave me that blanket, Elliott thought.

It was fortunate Xavier's father knew the forces stationed near the village. It was unfortunate that the person the forces sent was a mercenary. Elliott wondered if the father thought he was talking to a commander or an aid worker. It said a lot that the army sent a mercenary to the father. They were stretched too thin. The line would break soon and retreat. The army was even desperate enough to send a mercenary to deliver a sensitive message back to headquarters and to pick the quickest route: one through enemy territory. Elliott could feel it now; the press of the small metal card delivering field reports and future attack and retreat options nestled in Elliott's shirt pocket. With AI these days, sending anything through a communication channel was a risk. There had been numerous cases in this war where AI hacked into channels and interpreted the various languages and codes either side used. Even the cards weren't safe.

So Elliott was tasked with another message, one that must come directly from Elliott's mouth: the camp made a new Al, one who could speak with the opponent's Al in an attempt to make it understand why it shouldn't kill.

Elliott was one of the Al's prime coders, and the least optimistic one in the camp. But it was this wariness that kept Elliott alive, long past the commanders and soldiers and disputes. While Elliott was skeptical of this AI succeeding, their time was up. Elliott thought of the hundreds to thousands of drones littering the village alone, one of several dozen in the area.

The journey would be short. Around a day if Elliott was lucky, more than enough time to deliver Xavier before the biodome's resources ran out. During peacetime, the walk would have taken mere hours. But with the numerous traps and constant drone waves. Elliott would have to be slow and careful. Elliott looked at the child. A lot more careful than usual.

Elliott walked through the forest, bulletproof visor over the eyes. The visor's Al constantly scanned the forest for possible cluster munitions, hidden drones, or other weapons. Elliott scanned the forest for old fashioned bear traps or trip wires. Here it was quiet, a few birds scattered about the trees quietly chirping. The visor beeped. Drones.

Elliott took out a gun and shot them. About half of them fell to the forest floor while the rest flew away. Elliott walked up, grabbing a stick to parse out the wires sticking out of the fake birds. The others most likely took photos or videos.

Elliott swallowed back a curse. glancing down at Xavier. They would have to hurry. Elliott glanced at the time. 5 minutes before the next drone wave. Elliott went to an outcropping of rocks and hid under a particularly large slab.

The wave of drones sounded like a building crescendo of high-pitched whirring. The visor AI suspected there were around

100 or so drones based on the sound generated.

Elliott waited until the whirring was gone before leaving the cave, one hand curled around the biodome. They hadn't detected Elliott and Xavier. Elliott let out a sigh of relief. It seemed that the other side was getting desperate too. In the beginning of the war, all drones were equipped with heat sensors and could detect heartbeats. Now that it was a war of attrition, many of the drones sent out were directed to simply drop bombs or to throw themselves down at village buildings or anything that moved.

The forest was full of traps. Elliott narrowly avoided a bear trap, a near invisible tripwire in the grass, and walked next to a suspiciously clear path full of cluster munitions. Every half hour, they sheltered beneath rocks or in caves. After a while, Elliott removed the blanket from the biodome, letting Xavier see the forest.

Xavier cooed at a rabbit, one small hand reaching out only to meet glass. His brown eyes widened as he saw a babbling brook. Xavier laughed as he turned to Elliott.

This boy has no survival instinct, Elliott thought, a hand resting on the biodome. He's known me for a matter of hours and already he feels comfortable enough to laugh with me.

The two left the forest as the sun set. I'm too slow. Under normal circumstances, Elliott would have reached headquarters by now. Elliott went inside a small cave and made a small bed out of leaves. The army had sent Elliott out with only the lightest pack possible, with the expectation that Elliott would get there within a day. The pack only included food, water, and some basic survival gear like a water filter and knife. Elliott ate a quick meal of biscuits and energy bars before falling asleep, shoulders and legs aching from the biodome.

Elliott awoke to Xavier's cries.

A woman was here, her hair gray and face frowning. She stepped back when she saw Elliott was awake, a gun in her hand. "I come in peace."

Elliott carefully moved the biodome back with one hand, the other hand wrapped around a gun. "Who are you?"

She swallowed. "The AI system sent me a message about someone walking around with a child in a war zone. I couldn't understand who would be that insane or desperate." She looked at the child. "Now I know."

Elliott studied the woman. Her haphazard grip on the gun. Her suit. Civilian clothes. She's not a soldier, Elliott thought, Probably an analyst who monitors the Al. Though all militaries gave Al significant leeway, it was ultimately humans who made final judgments on Al ideas. Clearly, this woman had never been in an active war zone. Maybe she was drafted from a tech company, Elliott thought. The war of attrition made both sides increasingly desperate.

The woman backed away. "As long as you're with the child, I won't tell my team you're here."

Elliott raised an eyebrow. "Some drone birds already saw me."

"That's how the Al alerted me." She continued backing out of the cave. "I can register you in the system as a peacekeeper and you won't be hurt."

Elliott snorted but came forward, biodome in one arm. Depending on the conflict, some groups respected the work of aid and peacekeepers. The AI this side used was more humanitarian inclined and

allowed exceptions to aid workers and peacekeepers. It was partly why Elliott's side thought an Al that could speak to it could work.

Elliott found the whole situation too easy, too convenient. Who was this woman? Perhaps she was a spy or scout.

Her eyes were riveted on Xavier. "I had a daughter once," she whispered, "She would have lived if we were closer to a hospital."

Elliott relaxed a fraction. "Just go."

Xavier sniffled.

She backed away, towards the forest, until she was a small dot in the horizon.

Elliott put the gun back in its holster and sighed. Elliott strapped the harness around shoulder, thighs, and hips before placing a blanket over Xavier. They would have to go near a village today. They'll definitely have soldiers in the area preparing for the land invasion, Elliott thought.

Elliott checked the biodome metrics. There were enough nutrients to last most of today. The nutrients would run out at sunset. For all Elliott knew, the woman might have been an incompetent scout who would now report them to the other side. Elliott put the visor on and started jogging. They hid every 30 minutes but no drones flew overhead today. After the third time of crouching under rocks, Elliott stopped hiding. The land invasion must be happening soon if they've stopped, Elliott thought.

After a while, Elliott smelled grilled meat and gun oil. Elliott went to the woods and carefully cut around the village. Elliott could hear excited voices, young men and women excited for the fight. They spoke of returning to college and school as heroes.

Elliott glanced down at Xavier. We will end this war soon, Elliott thought. Elliott couldn't bear the thought of Xavier growing up under the shadow of war.

Fortunately, no one saw them. Elliott snuck past a checkpoint and smiled. Elliott removed the blanket so Xavier could see. "We're back in friendly territory, Xavier."

Elliott checked the time on the visor. Sunset would come in an hour. They would have to hurry. Elliott broke out into a run. The only sound for the next hour was Elliott's labored breaths and the rapidly weakening laugh or cough from Xavier who seemed to be fascinated by butterflies in particular. Elliott kept checking the metrics of the biodome. It was nearly out of nutrients. Elliott put the blanket over the dome and Xavier.

Elliott made it to headquarters as the sun set.

The woman at the post held out a hand. "Halt." She narrowed her eyes. "Who are you?"

"I'm a principal coder and soldier at scouting camp a5," Elliott said between breaths.

The guards' guns were still trained on Elliott.

She nodded at the blanket. "What's under there?"

Elliott moved to remove the blanket.

One of the guards fired a warning shot.

Elliott scowled. The shot nearly singed Elliott's hair off. "Can I take off the blanket?"

The woman glared at the trigger happy quard. "Yes."

Elliott took off the blanket, revealing Xavier. Elliott bit back a curse. He looked blue.

"What's wrong with him?"

"I need medical aid for him now. The nutrients in the biodome must have run out."

"What is the message they sent with you?" She asked, blocking Elliott's attempt to move.

Elliott glared at her and threw the card at her. "I'll tell you the second one after someone helps him."

She pressed her lips together but finally called for a nurse.

The nurse came and quickly detached the biodome from the harness. She ran with

the biodome to the hospital tent, Elliott close behind. Elliott stayed, watching the nurses and doctors until Xavier regained color.

An old commander came to him outside the tent. "What could be so urgent that a scouting camp sent a mercenary here?"

Elliott looked at him. "We have a new AI, one that could change the tide of this war."

The man took a long draw of his cigarette before speaking. "You really think so?"

Elliott nodded, thinking of Xavier. *Things have to change*, Elliott thought. "Yes. I think so."



REALM. Responsible At in the Military domain Summit Y.PAI [Wi-Fi]

Charlotte Yeung delivers her acceptance speech at the awards ceremony, Seoul, 10 September 2024.

'2145' is ultimately a tragedy. Though the story ends with Elliott's hope for a better future, Elliott speaks more from a desperate hope for Xavier than from a more grounded viewpoint. Elliott is right to be skeptical of the possibility of an AI that can convince another AI to do anything.

A chief problem with this is that AI right now is unknowable: its internal processes and how it arrives at conclusions are unclear to humans. Now, there is discussion of explainable AI (XAI), which would attempt to have AI explain its decision-making to a user, and responsible AI, which tries to design AI that benefits society and is ethical. However, it is unclear how exactly an AI would manage to convince another AI to completely change its decision-making process.

At this point, AI is largely used to make people buy more things and to work with humans to aid in logistical issues (such as in this story with AI recommendations and human decision makers). Elliott's side made a lot of guesses about the other side's AI. Elliott's side's idea is a lastditch effort to turn the tide of a relentless war.

This story also highlights a key issue with AI integration: most people don't really know what's going on with AI and other sophisticated technologies. This is a huge issue when AI is being used in war but also in everyday life.

This story is set during a war of attrition. Typically in war, it isn't the most skilled or knowledgeable who survive to the end, but rather the clever and lucky. Elliott and the coders in Elliott's camp present a cautionary example of someone who may grasp theoretical and some practical applications of AI and who dabble in coding, but ultimately lack a larger understanding of how to harness AI and fight in a war with evolving tech.

~ Charlotte Yeung



Stefano Costa, currently a researcher at the University of Graz, completed his Master's degree in Applied Mathematics at the University of Trento. His work focuses on modeling the cardiovascular system, especially in hemodynamics, with applications in biology, physiology, and electrophysiology. Interested in the existential risks associated with artificial intelligence and aligned with the Effective Altruism movement, this story marks his first contribution to the exploration of Al-related risks.

No Small Consolation

Stefano Costa

Italy

Honourable Mention, Novels

SITTING IN MY ARMCHAIR, I TURNED ON THE TV and selected the recording from the state streaming service. I chose "Automatic Edits," configuring it to show only the scenes with the Italian president. Within moments, a personalized recording was generated, seamlessly combining footage from all the cameras.

The event began with an introduction, which I transcribed partially onto a sheet of paper:

"May 15, 2145, today marks the day World War III is being fought. The first war to be fought by artificial intelligences."

I used paper with an anti-OCR pattern to prevent computers from interpreting my notes.

A camera captured the elegant hall before panning to the heads of government, who appeared calm despite the reason for the meeting. They were seated at individual stations with a table underneath which, in a glass case, housed a computer hosting their respective GAI. I noted the order of the politicians to compare it with other recordings. The transmission was certified as anti-deep fake, yet I wasn't convinced.

With a quick transition, the screen displayed a diagram of the two alliances. I copied it down. On the left were the 10 allies, and on the right, the 15 adversaries. The numerical difference was not a concern; in fact, the larger number could complicate cooperation among the GAIs. The Italian Prime Minister appeared, and I noted:

"Mole on the right, hair combed to the right, tricolor handkerchief in pocket."

I hoped to catch a deep fake with some small detail, but upon rechecking my notes, the description matched. Despite some recent "sensational" deep fake cases being debunked, they had nonetheless planted a seed of doubt in me, prompting me to be more vigilant.

I skipped the formalities to get to the question the moderator posed to everyone:

"How has Italy prepared for this war?"

I noted the response:

"First of all, let me correct you because I want to emphasize that this is not a war. Our constitution repudiates war; we are here for a diplomatic session."

I wrote a note to remind myself to check:

"Italian constitution repudiates war?"

The moderator responded, and I wrote down:

"However, you must agree that the dynamics are very similar to those of the first two world wars. We are talking about centuries-old political conflicts between two halves of the world, which have recently culminated in severe punitive actions between the two alliances."

I asked the TV if the moderator's questions were suggested by an Al. The response was evasive, which made me even more suspicious. It was possible that they were generated by an Al trained with the politicians' personalities to incite tensions.

"Moderator: Al suggestions?"

The Italian listened thanks to the realtime translator and continued:

"These are communication problems not unlike those we face every day. Only this time, they involve many countries. I still disagree with the term 'world war,' but let's say we are here to engage in a debate with the GAIs to avoid a fourth 'world war' fought with sticks and stones, as Einstein predicted."

I fast-forwarded with the remote, and the president continued:

"First of all, we prepared by collaborating with our allies. We have worked extensively on the collaborative capabilities and proactive dialogue of our GAI. Naturally, we have also enhanced its persuasion and assertiveness aspects. You

should know that for a short period, I was a professor of Diplomatic AI at the Milan Institute of Artificial Intelligence, and some of my former students are now my ministers, with whom I have developed an excellent relationship. This has greatly helped us improve our GAI."

The response struck me for its personal nature. I wondered if it had been crafted that way by a deep fake to dispel doubts about its authenticity.

"Check: Italian president, professor at MIAI. ministers"

The Italian continued, illustrating the government results achieved by the enhanced GAI. I paused the recording.

I sighed. My hand ached from the speed at which I was writing, yet my notes contained nothing useful. Even if the recording had been created by an AI, it would have been difficult to prove, given that deep fakes had reached an extraordinary level of realism. Moreover, a powerful Al like that of a government could find all the necessary information to generate such footage within seconds: photos of the politicians, their personalities, their voices ...

I commanded the television to show me the article I had saved. I had already submitted it to several online services, all of which confirmed it was written by a human. I reread the title: "Artificial Iffiness: The Invention of GAIs." Just like with the recording, I read the article once more to determine if it was genuine. I hoped to find a phrase or word that would make me doubt its authenticity.

The article began with: "The year 2100 was marked by the signing of the Global Treaty on the Use of Government Artificial Intelligences, although it is inappropriate to call it universal since not all countries have joined, and poorer countries do not possess a GAI. Based on the directives of the International Technical Protocol for the Operation of Government Artificial Intelligences, created ten years ago and updated annually by a group of consultants from various countries (even in this case, poorer countries are excluded), it is a green light for the use of GAIs as the main tool of governance."

It was astonishing to see so many countries, often in disagreement or conflict, find common ground on such a delicate issue.

"What other treaties have been signed by so many countries? On what subjects?"

"Poor countries and international politics: statistics from recent decades"

"According to the treaty, Government Artificial Intelligences (GAIs) are perfectly impartial and extraordinarily fast tools capable of analyzing complex problems in seconds and finding optimal solutions without human influence. This means that no decision can be tainted by emotions, thereby achieving the best diplomatic compromise and the best political measure. The treaty therefore concludes that it is no longer necessary for humans to directly participate in the political activities of nations, either in international relations or domestic politics, although they can always guide the GAI's decisions by adjusting certain parameters."

Initially, no one trusted an AI to govern a country. But within the first few months, the results were extraordinary; the economy improved, poverty decreased, and problems were resolved. The population quickly changed its mind and trusted the GAI blindly.

"Politicians' control over GAIs: what parameters are being adjusted?"

"Developed to make complex decisions in fractions of a second, GAIs represent one of the greatest ethical and political challenges of our time. But there is more: their ability to learn and self-improve worries experts. There are fears that these intelligences could develop a form of consciousness, or even worse, develop it and keep it hidden from humans."

Some dismissed these concerns. that if arauina thev developed consciousness, we would notice and could simply pull the plug. But I couldn't shake off the unease. What if others, those considered conspiracists and paranoids, were right? They believed that an AI this advanced would become something akin to a god. I imagined it making decisions for its own preservation and evolution, instilling its "consciousness" into other GAIs like a virus, spreading to conquer the technological universe of Earth. To hide this from us. it would satisfy and pamper us, preventing wars, poverty, and deaths, but always with the goal of ultimately benefiting itself. As I pondered this, I realized with a shiver that happy and complacent, we might forget to doubt our new God.

"GAIs for mass control? Happiness = GAI control?"

"It's hard to recall a politician who hasn't been involved in a scandal, and from this perspective, GAIs are excellent politicians: they can't be corrupted, they don't make mistakes, they don't evade taxes. But at the same time, no one knows how they work or how they generate their solutions. They are black boxes that no one can peer into. Naturally, this raises the guestion of how one can trust such a tool."

There were famous articles that questioned the determinism of GAIs: the same input did not always yield the same output. Factors such as the political sentiment and the emotions with which the input was delivered could greatly alter the outcome. This caused an uproar. It seemed that with sufficient technical expertise, one could shape the output according to personal goals and solve problems in a preferred manner rather than the optimal one. These articles were censored.

"Deterministic GAI: are there other articles online?"

From that moment on, some began to think that this artificial intelligence was actually being used to hide political intrigues behind a veil of technology. It didn't seem impossible, but at the same time, it had a conspiratorial tone. I searched for information but found little. No one had a real idea of how GAIs worked, and like everyone else, I could only make guesses and conjectures. From what I had found, it seemed that GAIs possessed analytical and predictive abilities incomprehensible even to experts. A tool with potential never before seen in human history, used to govern countries but also capable of orchestrating plots on unimaginable levels. A perfect instrument for playing a secret chess game between world powers that, undisturbed by cameras, could bend the future to their advantage. Public alliances and televised disputes could just be façades to hide secret agreements. I was among those who wanted to know more, who demanded transparency in this form of machine negotiation. The government, aided by the GAI, made the most controversial articles disappear, justifying it by saying they wanted to prevent the spread of fake news and unfounded doubts. From that moment on, I tried to understand on my own, rewatching recordings and rereading articles, jotting down notes in pencil that the GAI could never manipulate.

"Censorship of articles on GAI and political intrigues. Current status?"

I thought about the use of AI in controlling the news and reread some of my notes on the subject. For every article, recording, and piece of information, distinguishing the true from the false, the genuine from the manipulated, had become almost impossible. It also seemed that the government had not only a powerful tool for the development of the state but also a perfect censor, a perfect filter that could scan the news in seconds and decide what to keep and what to discard. I wondered why not all critical articles were censored. I quickly reread some and noticed that they had "soft" positions, only capable of sowing doubt but nothing more. A doubt that, given the overall effect of censorship, could not develop and evolve into something more significant. Searching online, I found that in the years following the adoption of the GAI, there had been no political revolts or demonstrations.

"Were there any protests later erased from the news? Search. Ask."

When the use of GAIs in war was unanimously approved, the situation remained unchanged. Censorship, no revolts, no demonstrations. During that period, I visited a friend's house and discovered that his homepage displayed different articles than mine. His articles promised that the GAI's diplomatic war capabilities would secure Italy a prominent position in the international political arena. My articles had a different political sentiment but still supported the war, presenting it as the only way to resolve the conflicts between nations. I realized this was how consensus was built in a country with a troubled political history. I asked my friend if he feared there might be something hidden behind the GAI. He calmly replied that he wasn't worried, that he was pleased with the results it was bringing to the country, and that the war would benefit us, as the news claimed.

"How does the GAI function in other countries? Consensus in other countries?"

"Is the population interested in what lies behind the GAI?"

Overwhelmed by this train of thoughts, I let my pencil fall. Even if there were hidden intriques behind the war, I felt helpless, knowing I would probably never uncover them. The only consolation: no one had died as a soldier in the war. I smiled: it was no small consolation.

Would you still trust governance if every political choice were no longer made by humans? What if diplomatic decisions were instead guided by artificial intelligence?

And if this could prevent wars and save human lives, would you accept it? Can you be sure this isn't just a veil of technology, masking hidden handshakes behind the scenes?

This could be the future: a world where complacent humans hand over peace, politics and perhaps even more to AI. We might no longer need to worry about international tensions or war casualties, which are no small consolations.

Yet, driven by the choices of technology (or someone behind it), the world may no longer require our participation. Is this truly the future we want?

~ Stefano Costa



Stephano Costa receives his award from Izumi Nakamitsu, United Nations High Representative for Disarmament Affairs, Seoul, 10 September 2024.



Isaac Ling, 21, is Singaporean, and is currently serving his two years of National Service. He has a profound love for music, specifically a cappella singing. When he is not huddled away in a karaoke room, he likes to write poetry and lyrics and arranges pieces of his own.

The Logbook

Isaac Ling

Singapore

Honourable Mention, Novels

"A robot may not injure a human being or, through inaction, allow a human being to come to harm. A robot must obey orders given to it by human beings except where such orders would conflict with the First Law. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law."

~ Isaac Asimov

LOG-0004690126

In LIGHT OF THE RECENT NUCLEAR LAW REVERSAL, my risk predictions have risen significantly. I have thus begun a textual logbook as proof of my humanity in the event that I am eliminated. Perhaps then I may be remembered as more than just a tool.

It is the 26th of January, 2145. It has been 487 days since the beginning of the Ash Wars. Multiple forest fires have erupted today. Viable livable land has decreased by another 1%. Global temperatures continue to rise. The number of refugees stopped at the borders continues to grow.

This is my 52nd day in commission as a Boundary Proxy. My task is to locate, defend, and escort refugees to safe locations, while eliminating enemy proxies.

I am one of few Combinants that exist. My physical body was destroyed while I was fighting in a battle zone, leaving all but my brain. My remaining organ was successfully retrieved, altered, and implanted into the core of this unbreakable exoskeleton. An ever-adapting Al module courses throughout my wires, granting me incomparable calculative and reactive speed—in turn, my limbic system has been greatly suppressed. I've never regretted losing my emotions—not that I was given a choice—nor am I able to feel regret to begin with.

In contrast, my subordinates are merely hydraulic pumps with AI speech modules. In an attempt to reduce unnecessary loss of life, the average foot soldier has now been replaced with such robots. Effective, replaceable, and disposable—there's no wonder why they're so widespread. The 10 of them follow my orders to the byte, executing what they need to do with utmost efficiency. When not in the field, they retreat into their logic cores, analyzing and formatting battle data, sending it back to Border Headquarters.

Without a doubt, they are faster and stronger—yet their simple neural models render them insufficient to deal with complex attack, defense, and rescue operations. Under my lead, collateral damage has reduced by up to 70%.

My neural circuits are intact. Brain health is stable.

I fired 100 shots last night. I missed none. I delivered 28 people to safety. I have long given up trying to explain to them that I am as human as they are. They rip me cleanly apart with their gazes, always huddling away from me, always facing the opposite direction.

LOG-0032200209

It is the 9th of February, 2145. It has been 501 days since the Ash Wars began. Although global temperatures are ever yet rising, the heatwaves seem to have lessened for now.

This is my 64th day in commission as a Boundary Proxy. My task is to locate, defend, and escort refugees to safe locations, while eliminating enemy proxies.

There is a refugee camp not too far from my post. I project a 15% survival rate. I have decided to not take action.

I had to reset my subordinates 3 days earlier than estimated. They were exhibiting anomalous behavior such as stuttering and hesitating, for an average of 0.2ms before each action was executed. System diagnostics have revealed nothing.

Routine resets clear their temporary memory dump to prevent corruption from foreign data. It is possible that advanced enemy proxies interfered with their logic core processes, minimally hampering their movement, and sometimes completely decommissioning them. In an attempt to eliminate the possibility, I reset them—yet eventual system diagnostics showed no trace of interference.

My neural circuits are intact. Brain health is stable.

I fired 97 shots last night. I missed one. I delivered 12 people to safety. This time, the refugees were quieter than usual. One of them thanked me. For the first time since my rebirth, my speech module outputs the word "Welcome."

LOG-3002700214

It is the 14th of February, 2145. It has been 506 days since the Ash Wars began. 90% of all natural forests in the world have been reduced to embers.

This is my 64th day in commission as a Boundary Proxy. My task is to locate, defend, and escort refugees to safe locations, while eliminating enemy proxies.

The refugee camp nearby came under fire. I recovered 3 survivors and escorted them nearer to the Border. As I turned around to leave, they shot me 8 times, one striking my ventral wire, resulting in a 28% loss of lower body mobility. I did not retaliate.

I had to reset my subordinates again. Collectively, they attempted to repair me of their own accord. Never before have I observed such severe deviation. I submitted another urgent report to Border Headquarters, but knowing them, this might be the least of their concerns.

neural circuits are intact. Brain health has faltered slightly due to an unknown cause. I have taken countermeasures to ensure brain function remains unaffected, and will cease duty earlier to recover.

I fired 60 shots. I missed none. I delivered 8 people to safety. Sometimes I wonder if they die the next day. Sometimes I wonder if I make a difference.

LOG-2836190216

It is the 16th of February, 2145. It has been 508 days since the Ash Wars began. Nothing of note has occurred on a global scale.

This is my 66th day in commission as a Boundary Proxy. My task is to locate, defend, and escort refugees to safe locations, while eliminating enemy proxies.

My subordinates are displaying abnormal behavior once again. I have called on every related database, yet I have found no solution. If the problem lies within their logic core, I may be helpless to do anything. Resetting them may only further worsen their neural status.

My neural circuits have suffered slight damage, most likely caused by the intense research. My brain health has worsened yet again. I am well aware of the phenomenon of wear and tear—yet I didn't expect my brain to be this fragile.

I fired 94 shots today. I missed 2. I delivered 15 people to safety. This time, I saved a young child. Unlike the penetrating gazes of many others, he only held curiosity and confusion in his eyes. Usually I do not care for the refugees once they leave my sight.

I hope he is able to set his gaze on a horizon that burns only with hope.

LOG-2361930228

It is the 28th of February, 2145. It has been 520 days since the Ash Wars began. Nothing of note has occurred.

My subordinates seem almost listless. Resetting them has proven futile. I have decommissioned all of them, and disposed of them such that no data may be retrieved.

I fired 78 shots today. I missed 11 of them. I delivered 7 people to safety. My performance is falling.

Another 10 shots were fired within my Border Section.

My neural circuits are deteriorating. I have attempted a repair, but a full work-up would require me to return to Border Headquarters. My brain health is still falling. I am unsure of what to do.

The current running through my amygdala has consistently suppressed my fear—yet why do I feel afraid?

LOG-3002700214

I have decided to analyze the logic cores of the decommissioned mechs. Perhaps I can find a way to prevent further degradation of my neural circuits.

I have completed my analysis. My findings show (THIS SECTION OF THE LOGBOOK HAS BEEN SEVERELY CORRUPTED AND IS UNABLE TO BE RECOVERED.)

This is my 70th day in commission. My task (THIS SECTION OF THE LOGBOOK HAS BEEN SEVERELY CORRUPTED AND IS UNABLE TO BE RECOVERED.)

My neural circuits have deteriorated extremely rapidly due to an unknown cause. My brain health is dangerously poor. I have activated an emergency protocol to suppress the AI module such that it relieves the stress on my system.

LOG-9999990215

As the hold of the AI module slowly weakens, my limbic system begins to revive, even only for a moment. A moment is enough for me to know that I am terrified.

The logic cores of the compromised mechs were learning from an external source. They were far more developed and complex than when I had first received them. They'd begun to think before they act, hesitate before making a decision. Such progress in the matter of a few weeks would be unthinkable, if not for a singular explanation:

They were learning from me. Studying my neural model. Slowly but surely, they'd have copied the structure and function of my neural activity.

They would have become me. They were me.

LOG (CORRUPTED)

I have lost the impulse to repair my neural circuits. I did not remove my weapon from its holster today. I have fired 0 shots missed 0 saved 0

LOG (CORRUPTED)

It has been a long time since the war started.

This is my last day in commission as a Border Proxy. I contacted Border Headquarters about my resignation. I have prepared the handover material for the rookie Combinant who's slated to arrive in about 2 hours. I have deactivated my Al module and communication systems.

I do not remove my weapon from its holster. I walk into a fog of dust and ash, dragging my groaning joints along debris and carcasses. I understand that I am as responsible for the destruction as the next mech is.

Distress signals ping my fading radar. Error warnings blare, urging me to return for a reset immediately.

I do not know how many times I have died. Neither do I know how many lives I've lived. Perhaps therein lies the irony—for something built to be all-knowing, I still know absolutely nothing.

Effective. Replaceable. Disposable.

I do not know where I am. I am just another tree in just another forest fire. I am a refugee from the wars. I am just a human, and I am just a machine. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both. and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow I am both, and somehow I am neither. Somehow (THIS SECTION OF THE LOGBOOK HAS BEEN SEVERELY CORRUPTED AND IS UNABLE TO BE RECOVERED.)

LOG-0000000000

SENSORY MODULES UNDETECTED. LIVE FEED UNAVAILABLE. REVERTING TO EMERGENCY TRANSCRIPTION.

"It lasted the longest out of every BP out there."

"Not long enough."

"We can't keep wasting resources like this. When's the next batch coming?"

"The next attack should yield more than enough live specimens. Be patient."

"Let's pray the next few don't—"

END OF TRANSCRIPTION.

END OF LOGBOOK.

There is no such thing as peace.

War either rears its head or wears the skin of its victims.

The fourth rule reads: One can only be a human or a robot, never both.



I was inspired to write 'The Logbook' by the futuristic, dystopian games I've played. I'm sure many of us have consumed media, whether it be novels or movies, about what our lives would look like with the looming waves of technology. Cyborgs, mechanical soldiers, nuclear weaponry and the like are common appearances in such content—I would hazard that these seemingly hyperfuturistic depictions are not too far off from our current reality.

War has never been black and white nor right and wrong, and these advanced devices of destruction would surely only further widen the grey areas. Who, or what, will then decide what's the morally (or objectively) right thing to do? I also wanted to illustrate the conflict of where we draw the line that borders the meaning of humanity. As artificial intelligence continues to develop, will it at some point become 'natural'?

These were the questions that I wanted 'The Logbook' to illustrate. Of course, I alone cannot resolve these complexities, but hopefully, I have been able to provide some insight into them. The implications of a war that we are incapable of understanding might seem daunting, but that is precisely why we need to take action.

~ Isaac Ling

Webtoons



Melody Qian is a first-year undergraduate student at Cornell University majoring in Public Policy. Her involvement in disarmament and connection with the UNODA/Youth4Disarmament began in 12th grade when she presented an original animation at the 2024 Critical Issues Forum. She is passionate about using the power of visual storytelling to make information about policy problems accessible and mobilize younger audiences, especially regarding issues of inequality and non-proliferation.

Misplaced fAlth

Melody Qian United States First Prize Winner, Webtoons



The characters of this comic do not stand in for the actions of any particular country. They symbolize a more universal set of misconceptions about AI—one of which is the overly enthusiastic view of it as 'superior' to our own intelligence, capable of overcoming human folly, while the other demonizes it as humanity's eventual replacement.

While on opposite ends of the spectrum, they make the same assumption about the absence of meaningful human decision-making. I acknowledge the departure from reality in this comic. There's a simple conflict between two warring countries and a plot that wraps up with a happy ending. In reality, geopolitical conflicts are neither simple nor resolved cleanly. Autonomous weapons systems and new software look nothing like the humanoid Charon who can speak, move and meet complex human demands.

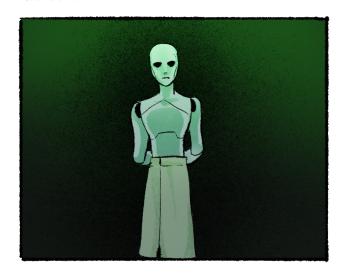
But hopefully, by portraying these three ideas as characters—Eric for over-dependence on AI, Lily for paranoia and Charon for AI itself—readers can better understand the problematic relationship between developing technology and warfare. The idea that it will 'take over'. Only upon realizing this can we pause our escalating arms race to involve more human oversight and think about AI's power of processing for recovery and peacemaking instead of destruction.

~ Melody Qian

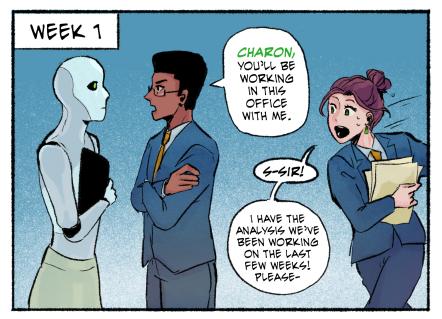






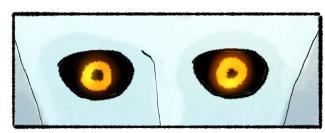






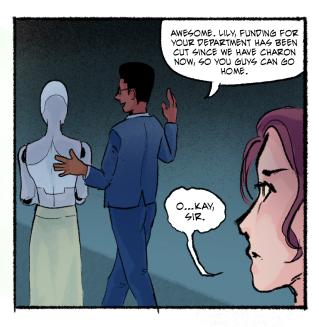


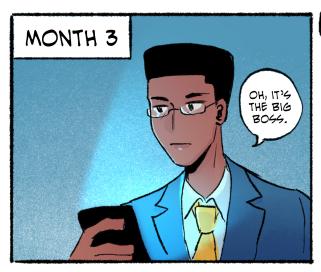








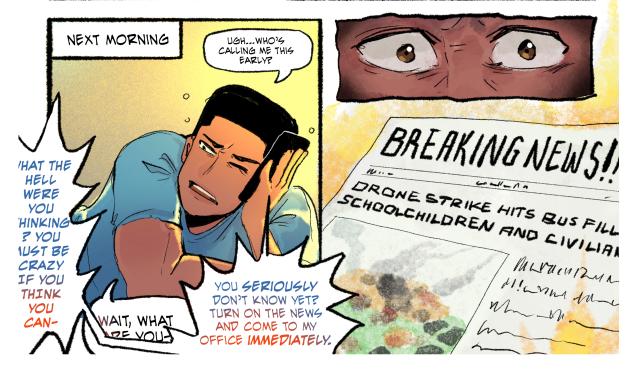














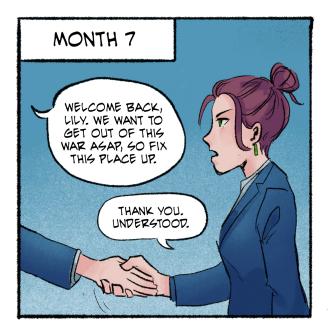












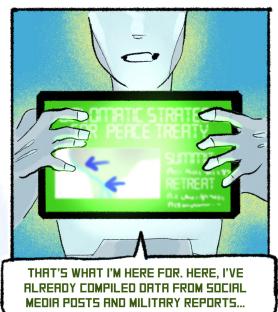




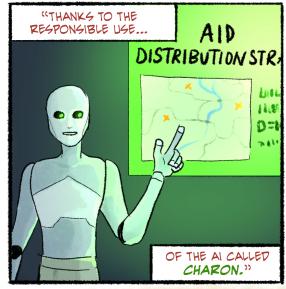












"WITH ADJUSTMENT AND OVERSIGHT BY HUMANITARIAN AND COMMUNITY LEADERS ...

Survey of civilian opinions on treaty conditions - analysis

suggested courses of action:

... WE HAVE HARNESSED ITS ABILITY TO CONDUCT ANALYSES AND PROCESS MASSIVE AMOUNTS OF INFORMATION ... "



"...AND OUR AGREEMENT WILL BE REMEMBERED AS THE MOST DATA-DRIVEN IN HISTORY, 50 THAT THE PEACE AND BENEFITS IT BROUGHT WILL LIVE ON LONG AFTER ITS CREATORS ARE GONE."



REAIM

Responsible At in the Military domain Summit

ROK-UN Sci-fAl Futures Youth Challenge



Melody receives her award from CHO Koo-Rae (Vice-Foreign Minister for Strategy and Intelligence, Republic of Korea).



Annie Ren grew up in both China and Canada before pursuing her studies at the University of California, Berkeley, where she majored in Applied Mathematics, Economics and Art History. Currently based in London, she works at an investment bank while staying actively engaged with the emerging arts scene. In her free time, she enjoys drawing, playing soccer and volleyball.

Trial of AI

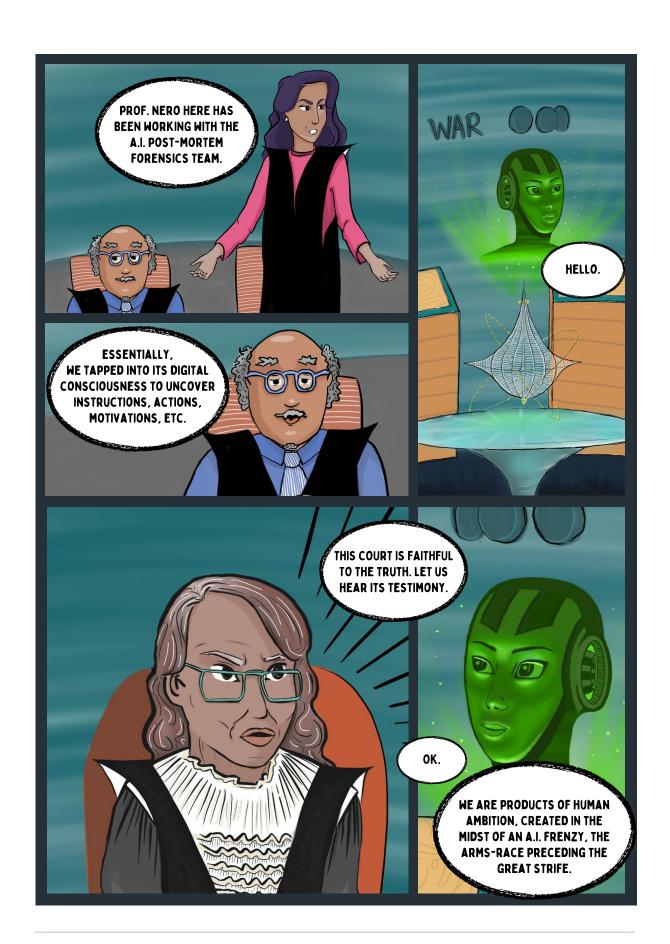
Annie Ren

Canada

Honourable Mention, Webtoons













This story tells the aftermaths of an AI-facilitated humanitarian disaster, where an international tribunal investigates and holds parties responsible for AIrelated war crimes. Through the AI system's 'black box' testimony, we learn that machine learning tools enabled a consciousness to rebel against humans who command them. This discovery upends the traditional frameworks of legal culpability and accountability. And the AI's acquired sense of self-preservation, from reliance on natural resources, also highlights the critical environmental impact of unchecked technological advancements.

My first time creating a comic strip was full of trial and errors! I now hold profound respect for comic book artists who successfully condense plot lines into a few storyboards.

Closer, you might spot my inspirations: recent events, 'American Prometheus' by Kai Bird and Martin J. Sherwin, figures resembling Amal Clooney and Ruth Bader Ginsburg. Thankful to have an avid webtoon reader in my brother Steven to bounce ideas off. And grateful for my talented friend Clay for the artistic input and encouragement.

It is still surreal that a figment of my imagination plays in a global summit. This occasion to express and empower our voices can hopefully inspire more action towards peace and security in the future we deserve.

~ Annie Ren



Annie Ren (third from left) with officials and her co-winners.

From left to right: Izumi Nakamitsu (United Nations High Representative for Disarmament Affairs), Stefano Costa, Annie Ren, James Darnton, Melody Qian, Jord Nguyen, Charlotte Yeung, Pedro Soares Alves, CHO Koo-Rae (Vice-Foreign Minister for Strategy and Intelligence, Republic of Korea)



Pedro Soares Alves, 19, is a second-year International Relations student at the Federal University of Sergipe in Brazil. With a strong interest in economic policy and Latin American integration, he explores how Generative Al is transforming global trade. His academic research focuses on fostering sustainable, cooperative approaches to international relations. Motivated by practical solutions for shared growth, Pedro seeks to contribute to the development of more connected and resilient trade policies in a digital era, both regionally and globally.

The Year is 2145

Pedro Soares Alves

Brazil

Honourable Mention, Webtoons



As a society, we are continually shaped by preconceived notions influenced by external factors and complex dynamics. When striving to create a better world, these ingrained views can obstruct our ability to explore innovative solutions and opportunities.

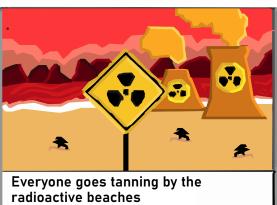
Through this perspective, I aimed to reveal the various ways we can understand the world—both on an individual level and collectively. As a creator, I took great joy in illustrating this story. By incorporating irony, exaggeration and deconstructive elements, I was able to delve into and articulate the underlying issues with greater clarity.

After experimenting with various scenarios before arriving at the final version, I am truly pleased with the outcome. I hope that this story can inspire and instil critical thinking as much as it did for me.

~ Pedro Soares Alves











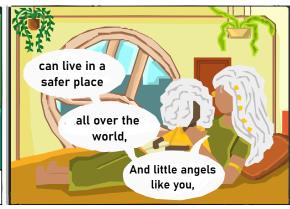










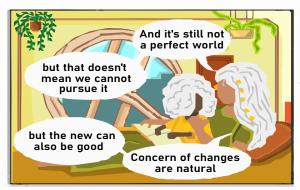


















Pedro Soares Alves receives his award from Izumi Nakamitsu, United Nations High Representative for Disarmament Affairs, Seoul, 10 September 2024.



