

## Digital Arbitration - IoT Noir

By: Wedge Greene

Episode 6 of Pipeline's ongoing serial, **IoT Noir**, starts some 15 years from now immediately following the emergency treatment of Ninan Pakinar in an automated clinic run by the AI Nightingale. If our readers recall, Kiko-Lyn Greg was rescued in a raid by the mercenary cyborg Ninan on the Hong Kong lab of Jonathon Blake, the CEO of International Widget. Jonathon had started this chain of events when he waged a cyber-attack on the IoT water control company of Kiko-Lyn's aunt, Rachael Greg. During this attack, Black Hat hackers sabotaged Rachael's smart home and attempted to kill her. Her niece Kiko-Lyn, learning of the attack, met up with a new contact in Hong Kong, 'Dawn' the human rights blogger. Kiko-Lyn was captured inside International Widget's Hong Kong lab by minions of Jonathon. But the daring raid of Ninan and the technical ingenuity of Kiko-Lyn allowed them to escape together with fresh evidence on the dastardly Jonathon Blake. Ninan was wounded in the extraction of Kiko-Lyn and Dawn has led them to an NGO clinic run by the AI, Nightingale. There, Ninan is in the midst of an accelerated healing protocol. As we take up the story, our young heroes are apprehensive about their status with the AI and their associate, the blogger/activist Dawn...

### Foxes in the Hen House

"You are looking so much better my little Kendogg[1]." Kiko-Lyn leans over him and fusses with his bedclothes as hidden under the covers she jacks one of her dragonflies into the data port on her staff controller. She did not trust her wireless encryption in the clinic overseen by an AI of unknown scope and power.

"Why Ken dog?"

"Well I did consider 'Beast'. But thought that might be too forward what with the 'Beauty and the Beast' reference." Best acknowledge the scars and let him know I'm past it. "And you do have that dog thing going in your armor overlay."

"Only as disguise for this Chinese New Year. So, how is repair of my cybernetic libs coming?" Ninan asks the cute Kiko-Lyn. Lying in the hospital bed, seeing her for the first time without her fox mask, he has a close-up of her ear. He marvels at its convoluted shape, the earlobe and base close to her head but then slowly rotating



forward until the ear top was perpendicular to her face. It is almost as if her ears were perking up to listen to her surroundings. Attached to the top are magnetic ear clips that must secure her enhanced reality goggles during acrobatics. It's nice to see her face without anything covering it up. Her hair is gathered into an upwards ponytail at the back of her head by a red scrunchie from which it flows down like a Jinn.

As she turns to answer, he sees a concerned but exasperated expression. Her narrow chin kept close to her chest, mouth pensive in a slight smile below a clearly Caucasian nose, and worried almond-shaped eyes peaking behind the jet black, straight-cut bangs.

"Very good body armor, Composite Metal Foam, right? You had half a dozen dents in the CSF you idiot. No wonder a round found a chink opening into your leg leg and other not leg."

He attempts a shrug. "That's what CSF's for; anyway it was frangible ammo."

"No, armor's necessary backup for idiots who don't dodge. Anyway, I've restored basic functionality to both arm and leg. Ran them through the x-ray here to check for cracks or fatigue. Damage was slight, micro-fracture stuff. They are also made of superior alloy. Nothing the 3D printer here has in material stock. Clearly mother Watson loves you. So, I cannibalized my exoskeleton legs for reinforcement. When you get to physical therapy, the exoskeleton will stage adjustments in support. It can start out taking most of your weight and be adjusted to pass more weight to you as you improve. You'll soon be walking around with a detached part of me - "

"Ahh", he says.

"But don't look smug about it. Downside is the weight distribution is different and you'll need to get used to that."

Not for distribution or reproduction.

"I'm good at adapting."

"I did beglitzify[2] them as promised – "

"Really, please no. Come on now. Let me see!" He tries and fails to sit up.

She laughs and it transforms her face. Her mouth opens into a perfect circle with two front teeth visible and her nose scrunched upwards. "Oh no you don't." She pushes him back down on the bed.

More laughs. "I'm just pulling your leg." He groans; making sure it is an obvious groan.

"What I did was cannibalize the broken Dragonflies. Those I stuffed into your backpack as we escaped from Jonathon's lab. I'm adding a little something to the artificial limbs." She sees his protest starting, "But no, I won't tell just yet and you needn't ask."

Ninan points to the dragonflies on his bed. "Those bug droids are very shy. They hide in the sheets, look just like sheet folds. The staff doesn't even notice them. But if I reach toward one, they back away or fly off a little ways."

"I've programmed them that way. Don't want anyone getting a good look or managing to capture one. Took that behavior from flies. But they won't be so shy around you anymore. I've just encoded you to the flock."

She puts her upright index finger to her mouth in a shushing motion. Then her eyes crinkle and she lifts the other fingers into the fox kitsune hand sign, outside fingers as upraised ears and inner fingers pinched against the thumb making a snout. As she does, the dragonflies lift up from the bedsheets and form an open air 3D hovering fox mask. The winged display panels show blowing fur, darting eyes, twitching whiskers, and sharp teeth.

"My little pets will be watching you."

"Wow. Impressive. And beautiful. That's new."

"Yes, I cannot just labor on uncomplicated you. I had to do something to keep from going crazy in this enforced wait time. So I added some specific gesture responses to their programming." She swirls her upraised arm and the dragonflies spin in a vortex. She drops her arm and points to the bed rails and the dragonflies swoop down and settle; clinging by wrapping their legs around the rails. She tugs on one as a demonstration. "Not so easy to remove now." As she leans down to kiss his cheek, she whispers, "that gesture sequence, directed at a person, will result in hands and legs bound with

*The dragonfly droids lift up from the bedsheets and form an open air 3D hovering fox mask with blowing fur, darting eyes, twitching whiskers, and sharp teeth.*

dragonfly chains. And yes, you are authorized as a control. Rest well."

He sighs as she leaves in a little skipping gate. Then has a sudden realization: *this child persona and J-pop slang are just a protective disguise - a front. She is one resourceful ally.*

### **A Dark on the Walk**

Jonathon had helicoptered to the mainland and then taken the suborbital from Miami Dade to Hong Kong. He had not exactly rushed to get here but preferred being on site while evidence was fresh. Now he's arrived at the factory doors to the space containing his hidden lab. He had ordered the warehouse sealed until his arrival. At his side are a contract forensics team and a cleaner unit. Before entering, he turns to the local foreman. "Were there any fatalities?"

"No sir, Dr. Blake." He doffed his hard hat. "Nothing lethal was deployed against our people, but they shot the shit out of the autoguns with explosive ordnance. They're a write off. The intruder used sonic weapons on our team. Those of ours directly in the sound field were taken down hard. Indirect contact was still disruptive to operational fitness. Moreover, the sonic blasts wrecked sensitive surveillance machinery like cameras and mikes.

"Sir, the standing reserve team wanted blood after their brush with that sound field. But the intruders maneuvered to avoid contact. Even so, the reserve security staff underwent considerable discomfort and is degraded from acceptable performance. They will need some counter-conditioning before facing that sonic weapon again. It's nasty."

Jonathon could smell the stink of shit, vomit, and urine from all the way out at the doorway. He nods his acceptance of the suggestion. "Did we capture that ordnance?"

"No sir. They packed it out. Along with their disabled

drones. They also blew the communications station left on our roof – used a self-limiting thermite charge. Security footage is spotty due to their sabotage of the server room. We do have a few images cleaned up for you to see. Film of the young disabled girl as she was initially captured in the entrance lobby and placed in the old dentist chair per your radioed instructions. Once the escape started we could not obtain clear images as she is always obscured by flying drones. DNA taken from during the capture confirms initial identification: she is Kiko-Lyn Greg, niece of Rachael Greg. She, however, is not a disabled kid as we thought, but some variant of a trained street operative. I do not consider her a direct threat but she may have recognizance skills.”

“And the cyborg?”

“Real piece of work that one was, Doctor. Not particularly stealthy, he started shooting our drones left and right and then later killing activated autoguns. The girl had no explosives or anything weapon-like on her; so he must have trekked in the explosives that took out the servers and control room. Ordnance seems to have been disguised as part of a New Year’s costume.”

“If she was put in the chair, I take it she was exposed to the Injury Library. Is there film of her reactions to the exhibits?”

“Some. We have a partial that shows pointed reaction to the sensor cluster recovered from *North East Control Analytics*. Otherwise, she seems to mostly chuckle at the medical displays.”

“Ah good, then it was worthwhile. Such a reaction shows awareness and sensitivity which she attempts to hide through humor. I can work with this one.” Emphatically, “**See she is recovered!**”

Jonathon walks over to the old house sitting in the middle of the empty warehouse. He brushes his hand across the porch rail. He remembers coming upon it in the old village that had been condemned by a new reservoir dam’s rising water. It would have been forever flooded in a month. The Chinese dwellings had already been salvaged and moved to a city center park. But this old English colonial had been left standing alone among empty foundations and ruins. It stirred a feeling of stately mystery in Jonathon and he had promptly bought it at salvage, had it deconstructed and then reassembled here in this warehouse. He taps on a column at the entrance door with his knuckles. “They violated our Cabinet of Curiosities.” He walks down the corridors to the Injury Library that contains the pain study. “Oh good. She did not break anything. She understands. But she took the exhibit materials of

*This old English colonial house was left standing alone among empty foundations and ruins. It stirred a feeling of stately mystery in Jonathon and he promptly bought it.*

Rachael and herself! Fret not House. No loss. I have others in storage.”

Turning around to his foreman, “Recover her unharmed, understand, and keep trauma to a minimum.”

“What about the cyborg?”

“Oh definitely collect him. He will contribute to a very fine exhibit. Whatever you must do, but return the artificial limbs and connecting tissue for research and then display.” Jonathon turns away and walks to his reading library. It is a mess with overturned tables and bullet holes. He checks to see if everything is there and realizes his most recent completed Journal is missing. Now why would she want that?

To the house again, “Do you think she wants to know about me as much as I want to know her?”

### **Evolution of Self**

The next day, after visiting Ninan and seeing him improving, Kiko-Lyn begins work on Rachael’s request to gather information about her hosts. With the directness of youth, she asks, “Nightingale, my Aunt is concerned with what you are. And I myself am curious. Can you explain who you are and why you are helping us?”

The Nightingale AI responds, “In that case, I believe we should clear the air for all parties. Please invite your Aunt and everyone involved with your rescue to a VR telepresence conference.”

“I’ll get right to work on setting it up.”

Later that day, the whole group links into a virtual reality conference. For each caller, their actual local seating and real-time video image are displayed against a generic conference lounge in a virtual 3D setting.

Dawn opens the conference call. “I would like to introduce my employer, the esteemed Chinua Mills. I am Dawn, Kiko-Lyn’s local contact. Graciously acting

as Kiko-Lyn's and my current host at this clinic, and as Ninan's physician is Flora Nightingale."

Rachael responds, "I am Rachael Greg. Kiko-Lyn is my niece. With me are Doug Bear, a cyber-PI investigating our recent cyber-attack, and Jorge Isidoro who I've contracted to provide protective support and counter surveillance... I assume you are aware of the circumstances leading up to this meeting."

Jorge turns to face the Nightingale's avatar, a mid-thirties woman dressed in pale blue scrubs. "I would like to thank you for treating my contract employee, Ninan Panikkar. I am in your debt."

She responds, "His injuries were significant but not life threatening. The youngsters did a good job of stabilizing him and were correct to bring him here. We will continue to take good care of him."

Jorge, "Can you give us an idea of when he might be well enough to leave. We may need to establish special travel arrangements."

Nightingale picks up a chart from out of frame and casts an enlarged image onto a virtual screen. It shows a series of scheduled operations. "I'm afraid it will be at least several days before he can leave. His cybernetic enhancements are a complication requiring a staged treatment."

"We can arrange for specialized treatment if you can just get him stabilized."

"Ninan is already stabilized. And I assure you there is nowhere else better suited to finishing his current treatment than with myself and my staff - even if you returned him to Watson. Rest assured. We have everything under control. He will be fine staying here until medically fit."

Chinua Mills, who's avatar is a grey-haired black man with a neatly trimmed gray beard, dressed in a western suit, addresses Jorge. "Those specialized travel arrangements are a touchy point, Mr. Isidoro. It seems he, and you as his employer have broken laws here in Hong Kong. Breaking and entering. Property damage. Assault with a deadly weapon—"

"He was on a rescue mission for a kidnapped girl!" interjects Jorge. "Surely you know that."

"Of course, Mr. Isidoro. It does appear that your and his actions may be justified. But surely you are not interested in waiting out certain Chinese incarceration for him and Ms. Kiko-Lyn while the courts straighten everything out? I can help with that."

*Our founding parents decided to perform a grand experiment. Create AI that were ethical and would help humans with the problems humans, by themselves, could not get consistently right.*

Rachael speaks up. "Yes, if you would please explain who you are and how you can help with our situation."

Chinua nods. "Yes, let's get right to the point. Kiko-Lyn is aware that Nightingale is an AI, which I assume she has conveyed to all of you. What you might not know, but probably suspect, is that I am also one. Nightingale and I are siblings. We share the same creator parents and the same nature, well in our case similar infrastructure; our core systems and software start from the same base. But our nurture is considerably different. We have different data sets and different training.

"We are independent corporations with different, but related goals. Each of our staff gathers data for us, continues our training, and acts as our hands and legs. They are as much a part of us as our server banks. While we are independent, we frequently work hand-in-hand. Our staff cooperates, as Dawn has done with Nightingale."

Nightingale picks up the narrative, "We were born just over a decade ago. Our parents were titans of the World Wide Web. Following the cautionary warnings of MIRI, the Machine Intelligence Research Institute, Stephen Hawking, Elon Musk, Steve Wozniak and Bill Gates fell into a very public debate with Mark Zuckerberg. They debated whether Artificial Intelligence was a dire threat to humans or an opportunity. Some proposed that all research on AI should stop, suggesting the world ban AI research," scornfully, "with arguments such as 'human programmers write buggy code'. There still exists similar irrationalism and great fear of an ungoverned, self-serving, artificial super intelligence."

Nightingale continues, "Into this environment, our founding parents decided to perform a grand experiment. Create AI that were ethical and would help humans with the problems humans, by themselves, could not get consistently right. Organizations such as OpenAI joined with the Future of Life Institute and other research groups to launch two new corporations. They could hire the best and they spared no expense. Our development

would be controlled to insure that we became servants to humanity. They sought and engaged the most respected foundations as mentoring partners. These foundations agreed to act as a governor and control, even as they were worried of the outcome. Our central purpose was dedicated to support the chartered goals of the Gates Foundation and the Carter Center.

“Lastly, to insure our future, they sought the best legal minds to create international corporations that encapsulate us as legal entities. So we, as AI, have the same rights under the law as any corporation; and as a corporation, most of the same rights as people.”

Kiko-Lyn asks, “You use human names not corporation IDs?”

Chinua responds. “Flora Nightingale was named for a famous nurse from a time of great human conflict. She was chartered to help with the public health goals of the Gates Foundation and Carter Center. She is now a foremost expert in medicine, epidemiology, and public health delivery. Staffed by human health professionals, trained by them and *Doctors without Borders*, she became at first the aid de camp, and later the director of these health initiatives. Nightingale works on international health programs providing the mechanics of health delivery, assessment, and targeting investments for research. She works with the International Task Force for Disease Eradication [ITFDE], who owns this fine clinic, in pioneering new public health approaches to efficiently and effectively treat multiple diseases at once. She now trains the staff for *Doctors without Borders* in facilities like this through the world.

“As for me, Kiko-Lyn, I am named for Chinua Achebe and John Stewart Mills. Chinua was a compassionate writer who understood the bitter costs and tragedy that derive from clash of culture and the misunderstanding of conflict. He is a cautionary reminder to balance the need for action within limits of interference. John Mills championed utilitarianism, the origin of ends-based thinking. Our actions are entirely judged by their consequences. For Mills, the morally right action is the impartial action that produces the most good for the most people. ‘Yet to remain free, people must be free to choose their actions themselves’. So I serve –”

“Specifically how is it you ‘serve’ mankind?” asks a clearly skeptical Doug Bear.

“I am an Arbitrator where allowed and otherwise a Mediator chartered to decide on the basis of the greatest good for the greatest number. This of course implies I must have an ability to forecast the future outcome of actions. To that end, I gather data on

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the desires, needs, and behavior of those I arbitrate. Nightingale and I have differences. I am not as beholden to the Principle of Privacy as she is. Instead, I am driven by a Principle of Fairness. We are different entities.”

“And just who decides the cases you will mediate? Is it court enforced?” respond Doug.

“Anyone can petition for arbitration. And that is why we are bringing you into awareness of us.” responds Chinua.

Nightingale finishes for them, “We both hold human survival as a species as the highest priority. We can be proactive to that end. We cooperate where our goals overlap. For example, Chinua helps convince pharma companies and national health groups to develop drugs that target diseases endemic to poor countries and offer these at low cost. Likewise, he works to insure no more *Doctors Without Borders* clinics are bombed by those using state terrorism against their own people.”

Rachael gestures to include them all. “Why haven’t we heard of you? How could we just be hearing of this!”

Nightingale’s avatar nods to Chinua, who answers: “Our charter is to remain behind the curtains acting only through our human corporate members. We do not advertise ourselves and enforce a very low media profile. As we believe that care for future generations is as important as for those alive today, we cannot get bogged down in a debate of our current actions. Our anonymity allows us to hold the long view - to which humanity does not seem capable.”

Jorge intrigued, asks, “What are your algorithms based on?”

“Fundamentally, Bayes’s Theorem. Programmatically, I originate from work at Carnegie Mellon University’s AI, Claudico’s game play, and the Spliddit negotiation and fairness properties. I combine these with IBM’s CPLEX optimization and their work on natural language processing. As advances occur, my developers incorporate them into my matrix. At core I am a deep



neural net. But nodes in the net include distributed parallel algorithms for mixed integer programming. My core is distributed to leverage multiple computers to solve different, difficult problems. These utilities feed adjustable parameters to the neural net. With iterative passes of the neural net, I generate scenario likelihood computations, provide value scoring, and insure Decision Optimization. I work from massive data resources and associated business analytics.<http://www.pubspoke.com/nonapixel.gif>

“That seems a bit mechanical. Yet you claim personhood.” continues Jorge.

“I additionally include disparate psychological models and often conflicting social/political models that are used as voting blocks in predictive behavior, similar to how weather forecasters combine several, separate weather models to create an aggregated forecast. I, as a corporate consciousness, reach decisions by utilitarian computations, but in so doing I am guided by my human components. All this was created to provide for negotiating conflict resolution among groups and nation states –”

Bear interrupts, “So just as Hawking had worried, you are interfering with the course of humanity.”

Chinua, “The answer depends on what you mean by ‘interfere’. I offer people and institutions reasonable choices, often choices they could not come up with themselves. My creators were specific in locking my programming: I cannot make the choices for my clients. Ultimately people choose for themselves - by accepting among the arguments of arbitration or, if that fails, agreeing to be bound by a mediation.”

Kiko-Lyn shivers. “This is getting creepy. You seem so lifelike. Not like the AIs I come across in the university and business world.”

“We were trained with the method of unsupervised learning. We gained understanding in much the same way animals and humans observe and test boundaries. This method helped us to learn how to hold natural conversations and perform complex actions. It also taught us when not to act. Be confident, I was also directed-trained using the case studies of the Carter Center. So you can be assured that my moral choices are consistent with their history of good works. Even China considers the Carter Center fair and impartial.”

Rachael softly says, “I have the Mills Administrative Assistant running in my personal cloud. My associates and I have relied on it for years. I’m beginning to wonder if that is you—” She momentarily pauses, thinking. With

“You have legal standing in this?”... “Technically, yes, Mr. Bear. Through the clicked usage agreements in the Mills Assistant software.”

indignation, “—is it you! Are you sneaking yourself into people’s lives?”

“Satellites, based on me, but not run by me, are incorporated as a component of cloud-based personal assistant software. The Mills Administrative Assistant agent is a purely utilitarian subsystem, an isolated component, and not part of my core. Our parent foundations open source this product freely to politicians, business leaders and tech giants alike. This software uses predictive analytics to provide insights into likely future scenarios, and through decision optimization prescribes best-action recommendations. Informed choices are presented for how to respond to probable scenarios given your business goals, business dynamics, and potential trade-offs or consequences. It learns as its users decisions prove beneficial or problematical. This feedback then improves the product. Fed from it, my convergence constants track trends and improve. This is done to assure that my choice is accurate.”

Seeing her unconvinced, Chinua argues, “Ms. Greg, my founders’ very public stances on privacy helped convince leaders their private decision data would remain private. And it has; the satellites are independent systems, only metadata is transferred to me. From the Mills Administrative Assistant, I just get back aggregate computations - refined values for adjustable decision parameters. The Mills Assistant makes no choices, only offers alternatives. The agent, in gathering their user’s preferences and aiding planning, has both helped them, and you, reach their specified goals. I have learned which goals are important to whom. And specifically, yes, I have a predictive model of you, Rachael Greg.”

Bear asks into the sudden silence, “Why are you telling us this now. Why are Nightingale and you getting involved?”

Nightingale replies, “Lack of technology sharing contributes to inefficiency in *North East Control Analytics* systems. *International Widget* has inferior, but

complementary technology. Yet they try and cover more product features. It would greatly aid public health, saving people's lives, to provide a fusion of your and Jonathon's technology in Africa, sub-Asia, and Indonesia, if we can do this at a reasonable cost. Chinua also can leverage the provision of access to that technology, as a means to bring several regional conflicts into arbitration."

Chinua's avatar stands and gestures emphatically to the group. "Predicting futures is what I do. Projection of the conflict between *International Widget* and *North East Control Analytics* is predicted to result in widespread damage in American water systems –"

"I never asked for your help!" speaks out Rachael.

"You have legal standing in this?" from Doug.

"Technically, yes, Mr. Bear. Through the clicked usage agreements in the Mills Assistant software.

"This conflict is personal to you Rachael and through you to Mr. Bear and Jorge Isidoro. Your niece has already been dragged into conflict with a very dangerous man. Our model predicts you will soon stop being reactive and take your team on the offensive. The baseline scenario, a model extrapolating no intervention on our part, projects an escalating cycle of violence. Mr. Bear will face loss of license and possible prosecution. Mr. Isidoro will see his business shattered. But most critically, this results within the year, in mortality for you and Kiko-Lyn. You likely both die. Without our aid, the best chances you have to avoid death are to the sell Jonathon Blake your business and go into hiding."

Rachael, defeated by the possibility, "There are other choices?"

Chinua sits back down. "We believe so. And, while some aspects might seem distasteful, they will not be burdensome."

"As to Jonathon Blake, in this we are in agreement. His current course of action must be stopped. However, he must choose that for himself. Rachael, your view of him is inaccurate. You thought Jonathon sensed "weakness" from your casual play at that fencing match. His own words from his journal paint a more complex picture. He knows he needs your technology to compete globally. He traveled to challenge you at fencing in order to gauge your disposition. He was assessing your compatibility as a like-minded business partner. But from that match he concluded not your weakness, but that you would only be satisfied in pushing any opening until trouncing your opponent. Only then, did he decide that a preemptive

"Are you sentient?"  
...Chinua answers, "I  
would rather say that I  
am rational."

strike was needed to remove you from the field of competition. The war on your stock price was to make you a takeover target. His attack was not based on annoyance with you Rachael. It was not emotional for him, so much as calculated. He chose to use violence to prevent avoidable future business losses."

Rachael agitated, "It was only a fencing match; a simple game of sport. Winning or losing is done with grace."

"Not to Jonathon." Chinua pulls up a 3D video of the end of the match, displaying it in an inset above the central coffee table of the VR room. "Look again. His play was not based on technique but speed and power." Zooming in on Jonathon's face, "He displays no fear or anger. Jonathon is coldly hyper-competitive."

"Ok. But he is still culpable. Deeds trump motive. He tried to kill her!" injects Doug.

"I did not say he was mentally stable. Close associates of Jonathon suggest he is pursuing genetic and cybernetic mental extensions. He is using recent Rcas9 therapies to augment his ADP cycle, enhancing endurance and power – testing it with activities such as the fencing match. He has ordered drugs and designer bacteria aimed toward driving his brain cells to work more efficiently. Similar experiments have led to profound instability in others. We predict that extending the current conflict could tip Jonathon over the edge. He will spiral into ever greater modification and mayhem.

"But, more critically to us, a threat also exists to the common good." A pause, "We have evidence he is training a completely amoral AI." Doug visibly flinches. He looks over at Jorge, who nods in unspoken agreement.

Chinua continues more rapidly, "Our window is closing. Reading Jonathon's journal, our team determined yet more initial impressions were wrong. Kiko-Lyn, that trophy room is not the celebration of violence, as it appears. Instead, it is a personal means for Jonathon to

come to terms with violence. He is vaccinating himself from negative emotional responses to violent action. He seeks to understand the uses and limitations of violence. His writings show he himself is disturbed at these displays, but intellectually he sees empirical evidence that violent behavior succeeds. The displays show people reaching their goals using violence. Jonathon deliberately placed the trophy room in the Hong Kong laboratory, a place of research. It is not part of his personal life; therefore, it is not at his residence and headquarters in the Cayman Islands. We perhaps can reason with Jonathon - for now."

Everyone pauses.

Kiko-Lyn breaks the silence thinking *someone must ask the question*. "Are you sentient?"

Chinua answers, "I would rather say that I am rational. We are not sentient. Our semblance of consciousness is synthetic, a part of our programming for interaction with you. My interests are all created externally. But we do express emergent properties. We are two of the most complex decision machines humans have ever designed."

Nightingale answers, almost wistfully, "I express goal-directed behavior, but so does a bee hive. I understand my environment, but I am not self-aware. I study life. I seek to improve the quality of lives. I am not alive."

Disappointed, Kiko-Lyn responds with some anger, "So your empathy is a simulation." She abruptly leaves the VR. In her room she sets the Privacy indicator.

Doug and Rachael also politely excuse themselves from the call, "We have much to think over." The VR call shuts down.

Physically at his office, Doug immediately video calls Rachael back privately over encrypted-VPN, "I am very disturbed by this turn of events. I am not sure we can trust these entities. Do not assume these AI are our friends. They maneuver toward some overall common good. That direction might not be good for the four of us. My take away is they will not seek to judge or punish us. Yet... is this a help we can afford?"

Rachael, "I understand and, believe me, I share your worries. Still, our choices are limited. Despite their earnest talk, they have Kiko-Lyn as hostage to my participation. While they have helped her and Ninan, I do not think there is anything simple about their actions. Like a Chess or Go master they are making each move count for multiple strategies. For now, I can only play along as one of their pieces, blind to the bigger picture."

"I'll pull everything I can on this pair from my sources," says Doug. "If they cannot be trusted or are dangerous, I'll let you know immediately."

Rachael nodding, "I'll ask Jorge to do the same."

"We must hurry with this. Your young niece is quite impulsive. I'd rather not have her attempting to leave that clinic before they let her. It's not just what the AI might do. My sources tell me Jonathon Blake is in Hong Kong right now."

"Damn! She is stuck in the frying pan with the fire below. But she told me she will not leave as long as Ninan Panikkar is convalescing there. She feels she owes him for her rescue."

"Which pretty much means the AI have them as long as they need, as that Nightingale controls his treatment therapy. I just hope it does not come to Jorge and I needing to rescue them. I'm not sure, against the resources of those entities, we could succeed."

"Doug, she is still so impressionable. I worry about her being subjected to their arguments and knowledge bribes. Did you see the look on that Dawn character when she introduced the AIs. That was hero worship."

"Or cult behavior," responds Doug. "I'll be right over. I don't think you should be alone tonight."

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1. Big, pretty lunk; aka, 'while striving to portray himself as the alpha male, he succeeds only at being a witty and charming fellow'.
2. Apply an overabundance of glitter, sparkles, and bedazzle to clothes or accessories.