

Coiled Alizarine Unconformity



The woman on the screen was shrieking, her face red with rage as she lunged at the bot. Her fists ineffectually battered its white plastic shell as it vaguely tried to defend itself. Its calming comments were drowned out by a shrill stream of invective.

"Making snuff, Rodger?" Bad Ferrara commented as he entered the room carrying a case of beer bottles. Rodger looked up from his console and smiled.

"Hi Bad. No, just checking my new masterpiece. Just watch." Rodger opened a voice link to the test chamber: "Coiled alizarine unconformity: stand down. Passive mode." The woman, who a moment ago been murderously looking for a tool dropped the pipe she had been hefting. She slumped to the floor, covering her face with her bloodied hands. Rodger turned down the sound of weeping.

"Obedience programming? That's old hat." Bad offered a bottle of Tsingtao.

"Thanks. Sure. I just used the fake puppeteer neuro we got from Chan Ling. The interesting part is how it got into her."

"I don't get it, I'm just a 426. By the way, who is she?"

"Just a random I took from the stacks. I sleeved her into that scratch morph and put her into that room. A voice command, and she hated the bot more than anything. A while before she wanted to have sex with it..."

"I'm sure that appealed to you."

"I would be a liar if I said it didn't. But the point is, she has a fully functional fake puppet network running in her brain. And it got there without me doing any psychosurgery."

"How?"

Rodger brought up a series of video clips showing his lab, happy to show off to his friend. "I used another random to infect the ego bridge with a virus. First I spliced the virus into him by hand, then I had him upload using that box. Then I printed out miss anger management. Works like a charm."

"Let me see. You have a brain-carried virus that infects ego bridges. Anybody who uses one of the bridges get printed with the virus. And the virus got a puppeteer payload allowing you to control the infected?"

"Almost right, amigo. I combined the Ling puppeteer with a little neuro-AI I picked up from George's T-Gang. The AI keeps in touch with its peers, allowing them to plan and coordinate when I'm not around. Right now patient zero and miss random are actually in low-bandwidth subconscious contact using a blog messages. That's actually what I am testing now. The sex and violence is just to check that the puppeteer works fine."

"Sure, Rodger. Actually, you don't need to test that part. We know it works perfectly." Bad's smile had turned spiteful; Rodger looked slightly perplexed at his friend.

"How come?"

"Remember what I did to Raudies? And miss Brunel?"

"That was ages ago. I got over that. We're friends."

"Funny that you should say that. Just this morning you said you would kill me if you ever saw me again." Bad broke the bottle against the console, hefting it experimentally. Rodger tried a conciliatory smile.

"I... don't remember that. But you are my best friend. I know that."

Bad smiled. "Sure you do. Coiled alizarine unconformity: fear me."

Rodger's eyes bulged as he retreated towards the wall, unable to avoid watching Bad slowly approach. He was screaming long before the man touched him.

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“Ah.” Mountain Master Currarino waved the display closed and turned to the others in the conference space. Rodger was pale and sweaty, but the beginning of a triumphant smile flickered at the corner of his mouth. Red Pole Ardid stood behind him, expressionless as always. The others were watching with interest.

“Brother Cicada, we thank you for this convincing demonstration of Coiled Alizarine. It has convinced us that your unauthorized use of the scratch morphs was indeed for the good of the network. A tool that makes deadly enemies friends is wondrous indeed. A tool that spreads from mind to mind is even greater. Thank you for this gift to our cartel.”

Rodger began to thank his master profusely.

“I think a proper repayment for our test of Coiled Alizarine on your fork would be Mr Ferrara. We are sure you can use him most creatively next time you need a scratch person.”

As the triumphant Rodger left the conference space the Master turned to his Red Pole: “I find sore winners most annoying. We can all do with a bit more humility. Wipe that instance and restart Rodger from yesterday. But do not forget to give him Ferrara, he has worked for it.”

Coiled Alizarine

Coiled Alizarine is a cognovirus developed by the Nine Lives syndicate, intended to infect ego’s and make them more controllable. The syndicate is already good at brainwashing and enslaving egos that fall into their clutches, but it is a fairly labour intensive process. Slave masters and sufficiently ruthless psychosurgeons are scarce, even when they fork themselves.

The virus is intended to not just hack egos, but to set them up into controllable networks. This is a significant jump up from normal brainwashing software, made possible by a genius combination of one ego-bridge virus named “Darkly Excited”, one puppeteer AI “Colorless Green” acquired from another syndicate, and some devious botnet code, “Crimson Thoughts”.

The whole stack of Darkly Excited, Colorless Green and Crimson Thoughts pushes what human hacking, psychosurgery and AI can do. In some campaigns this might be beyond what even major hypercorps can do, in others it might be entirely typical for Nine Lives. It is up to the GM to determine exactly how well a system like this can work. But remember, if it is not possible in 10 AF it might be possible in 11 AF.

Darkly Excited infection

Darkly Excited is a virus that spreads using ego-bridges. It exploits a vulnerability in the neural encoding libraries of Acres Communications (in particular LibNeurMLParser 32.0.1), allowing the virus to infiltrate ego-bridge software from a transmitted ego. It then quietly inserts itself into other egos entering or leaving the bridge. Once infected the ego-bridge will remain infected until a hard reset and restore to factory settings. The vulnerable library is obscure but fairly widespread: after the Fall it has been massively copied by many of the open-source communities in the outer system.

The basic Darkly Excited virus is just a program that hides its "head" within the meta-information surrounding an ego file (personal identification, various error correction codes, debug and tracking information etc.) and the "body" inside the neural data of the ego file. On arrival in a vulnerable ego-bridge the "head" is read and activates the "body" (through an old debug hook called RNMSC, Reserve Neural Model Self-Check). The "body" takes control over some functions of the Acresa library, installing itself so that it can infect other ego files.

When an infected person is resleeved the worm follows the ego. Removing it requires at least excising the "head" from the metadata. This should remove its virulence, but some clever variants (called Inner Darkly Excited) use "bodies" that cause the head to reform during the processing before the next egocast thanks to some clever manipulations of neural module checksums. To get rid of this version some minor psychosurgery has to be done to disrupt the checksums. It is not hard to do once the function of the worm is known.

The real potential for Darkly Excited is to do more than just hack ego-bridge software. For a brief time it has full access to the ego file and can edit it. If the worm is equipped with a payload it can do all sorts of nasty things. It can install other mental malware, it can create backdoors into the ego that can be accessed afterwards, and it can do neural hacking.

While Darkly Excited has great potential it is only a matter of time before it will be discovered. There are enough paranoids around who run constant self-checks, backups are occasionally compared with their originals and some muses turn out to be hard to hack. This means that once it is released there is only a span of a few weeks before it will be detected and people will start blocking it.

[To spread during resleeving the ego and biobrain need to be compatible: the virus cannot infect AGIs, uplifts or people with deviant mental architectures. For a normal transhuman the infection rate is 90% (roll 1d10, if a '10' the infection doesn't take).

Detecting Darkly Excited in an ego-bridge or the ego metadata requires somebody to look it over for infection and succeed with an Infosec test. Cleaning them up requires a second Infosec test.]

Acresa Communications

Acresa was one of the greatest pre-fall megacorps. It dominated communications infrastructure worldwide, although most consumers never encountered it directly. Like Cisco or Verisign, it maintained key infrastructure behind the scenes. Unfortunately the Fall also completely wiped out the company. While some employees survived, the legal structure of Acresa was completely disrupted. In its place a variety of hypercorps erupted, most notably Nimbus.

However, in replacing Acresa they often re-used the existing infrastructure and software. This was true for the autonomists too: they seized the chance to "take back control" over the software, incorporating it into their open source systems. Unfortunately there are plenty of old bugs and vulnerabilities. In theory they should all be fixed, but the sheer scope (and messiness) of Acresa software has made this a time consuming process.

Colorless Green abilities

Colorless Green is a simple AI that is implemented as a neural network within the ego of its victim. It is little more than a Device AI that runs as a secret subsystem of the mind, able to perceive through the senses of the host and to some degree draw on the understanding the host has of what is going on. It can also control host behaviour, although not with a high degree of skill.

When first infected, the process induces 1d10 SV due to the automatic neural editing. Ideally the GM should hide this from the PCs by distributing the points among the stress from continuity and resleeving, but it might also be a secret extra number not shown on the character sheet until it becomes obvious.

Over the first days after infection the AI just gets to know its host, and starts linking up to the local Crimson Thoughts nodes. It learns the latest news, downloads Darkly Excited patches to deliver if there is a further visit to an ego-bridge and begins influence the host behaviour according to instruction.

Colorless Green has the following abilities:

- **Plus/minus:** the AI can reward or punish certain actions, subtly steering people towards desired behaviours through operant conditioning. This is potentially very powerful, but takes time. Treat it as limited or boosted behavioural control (p. 231) after a week.
- **Hidden channels:** subconscious introduction of typos and other small signs into online activity, allowing the AIs to send messages. For example, the use of wording and spaces on a popular rep blog will contain steganographic messages. This is low-key and slow. However, this allows Colorless Green instances to link through the Crimson Thoughts network and form a botnet ready for more complex commands.
- **Emotional control:** A set of links into the limbic system allows the AI to activate strong emotions against a certain target. The AI is unable to control exactly what will happen. The host often rationalizes the emotion if it is not too jarring. Typical effects are:
 - **Best Friend:** the target is experienced as the best friend the host has.
 - **One True Love:** the target is experienced as the one true love.
 - **Greatest Fear:** the target becomes the most horrific thing the host can imagine. The host will want to avoid it at all costs.
 - **Worst Enemy:** the target becomes the most hated enemy imaginable. The host will fly into a rage and wish to harm the target in any way.
- **Delusion:** Hosts may notice that something is odd if they succeed with an INT roll after having performed some influenced action. Most of the time people just rationalize what they do, and this tendency can be played up by the AI: if it thinks there is risk of discovery they can temporarily induce a less introspective state. This gives -10 COG and INT, and a generally dazed behaviour.
- **Direct control:** Leaving all subtlety aside, this takes control over the host like a puppet implant. Given the low aptitudes and skills of the AI, the movement and behaviour is

noticeably stiff and zombie like. It is fairly obvious that something is not working properly.

Detecting Colorless Green directly requires an ego snapshot of the person. Comparing it to an earlier version will easily (normal Psychosurgery test) find extra neural connections that should not be there. If there is no other version to compare to, there is a -20 penalty for finding the extra structure. If the psychosurgeon is not looking for anything out of the ordinary, -30. Once it has been detected a Psychosurgery test can identify what it is. MoS less than 30 will reveal that it looks like a "soft" puppet sock implant, with extensive connections to the limbic system. MoS 30+ will reveal the existence of the AI itself. Disabling Colorless Green requires a psychosurgery test with a timeframe of one day, but leaves most of the extra connections in (the AI is just broken) (SV 1). To completely delete it a timeframe of one week is needed, and it has a -30 penalty (SV 1d10).

Crimson Thoughts

The final part of Coiled Alizarine, a human botnet. While people infected by puppeteer viruses are bad enough, a coordinated infection is far more dangerous. As people get infected they spontaneously link up via sites on the Mesh to exchange information. Typically this occurs by posting to certain random forums, making apparently innocuous comments with minor typos or patterns that the Colorless Green AIs can read. A post on a Scandinavian cooking website requesting a Norwegian lutefisk recipe and the ensuing discussion can hide the AIs linking up, checking for updates to their instructions, and coordinating actions.

The people responsible for the Coiled Alizarine network can send commands into the Crimson Thoughts network, for example instructing all infected people to become positive towards a political candidate, to transmit any passwords they encounter up through the network, or to hate and attack certain people. Contingency plans like going into full zombie and attempt to take control over the habitat mode (possibly guided by more skilled AIs) in the case of imminent discovery can be coordinated.

Detecting Crimson Thoughts is hard, since it involves a lot of subtle steganographic patterns by apparently unrelated people. Just noticing the pattern on its own is extremely hard: somebody monitoring communications where Crimson Thoughts are being exchanged will need a Perception -60 roll to notice that something is odd. This is helped if they know some participants and can notice that it is slightly unusual for Tanzanians to care about Norwegian cooking – this reduces the severity to merely -30. Once the oddness has been detected it takes Academics: cryptography to figure out what is going on, and then a further Academics: cryptography at -30 to start decoding the language used. Deleting the forum or altering the posts can mess up the network (and make the AIs panic), but it usually has several different forums (finding them all requires a successful Research roll). Once the network has been understood, it can be infiltrated using Infosec as if it was a normal system using the intrusion system (p. 254).

Adventure ideas

The PCs are visiting a relatively isolated space habitat. There is something odd going on. Can they discover the creeping infection – and are they themselves infected, since they arrived through a vulnerable ego-bridge.

This habitat might be a breeding ground: the launchers of Coiled Alizarine want to test it out properly in an isolated population, and once enough people are infected get them to go abroad to spread the infection further. Say, isn't the scum barges of Phelan's Recourse due to pass by in a few days? The infection must be stopped before then, or it will spread massively.

What use is Coiled Alizarine to Nine Lives? One possibility might be to use it for massive rep fraud, blackmail or sabotage of competitor operations. But it might also be profitable to rent out the capacities to various groups. The PCs are sent to infiltrate an auction where underworld types bid for the chance to give commands to an existing Crimson Thought network. Can they get the evidence they need to dismantle the operation?

Something is hi-jacking the network! Competing hackers or weblife have discovered Crimson Thoughts and are inserting their own commands into the network, using it – and its victims - for their own nefarious ends. The hi-jacker might even be an emergent AGI formed out of the Colorless Green AIs: a rather slow seed AGI that most of all wants to protect its own existence. Firewall agents, software police and criminals might be scrambling to contain an outbreak of increasingly smart zombies.

Just the Darkly Exciting virus is enough to cause problems. Why not create a psychosurgery virus that makes people like the new Soku Scramble Suits or develop a phobia against hypercorps? Anybody egocasting to a particular habitat might be infected with a badly written piece of mental malware, which itself is open for further hacking.

Coiled Alizarine is intended as a weapon against the autonomists, especially the Titanians. Anti-autonomist fractions have realized that their egocasting infrastructure could be vulnerable to something like Darkly Excited, and then the whole new economy could be destabilized by organized rep manipulation. Even discovering the infection might be useful: the more paranoia, the less of the necessary trust the autonomist communities will have. Can the PCs discover the plot in time? Or, can they pull it off and help defuse the anarchist menace?

The whole Coiled Alizarine package is an impressive attempt to imitate the Exsurgent virus. But it is all human-made code, right? Firewall investigators might start worrying that the system has some elements that seem to be reverse engineered from the exsurgent virus, like the Ling puppeteer. They want agents to find the source and make sure they are not doing anything worse with the virus.

Inspirations

For a far more effective version of the virus, see Curious Yellow in Charles Stross' *Glasshouse*. For some interesting human botnets and infections, see Hannu Rajaniemi's *The Quantum Thief*.

*Curiously deep, the slumber of crimson thoughts:
While breathless, in stodgy viridian
Colorless green ideas sleep furiously.
The Night Mirror, by John Hollander. ©1971*