Adam Rothstein

Astronaut Luggage

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"I'm not afraid of "getting the future wrong," as I almost invariably will. I'm actually intent on exploring our very mysterious and unknown present moment".

_ William Gibson

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Introduction

The future is a problem. The present is a problem too, but the fact that we are saddled with the present whether we like it or not makes it seem like less of an issue. The future, on the other hand, we think that we can affect. This spawns a whole host of issues: how to we affect it, what is this future that we are trying to affect, what do we try to affect it into becoming, how do we know if we successfully affected it, how do we know if we failed?

It's easy to talk about the future and hard at the same time. It is difficult to say that someone is answering any of these questions wrong, so there is little risk to opening one's mouth. But this is because it is even more difficult to say that someone is answering any of these questions right, so there is even less payoff in hazarding a guess.

And so here we are, in this present, looking towards a future, having trouble figuring out the line between these two points.

But there is another option. Not so much an option, but a supplement. Not an alternative to the problem of the future, but another thing that we can do about it.

For lack of a better term, we'll call this supplemental option atemporality. Many people have theorized what exactly this might mean, but the two people I have taken the most from in my understanding of it are the science-fiction authors William Gibson and Bruce Sterling. These two spend a lot of time thinking about the future, and so they are probably as equipped as anyone to start thinking about the non-future.

Because that is what atemporality is. In the above mentioned problem, there is past, present, and future, and the ways we get from one to the next is a difficult dilemma. So for a minute, let's say fuck it. There is no past, present, or future. There is no devious road of temporality weaving between mountains and cliffs and oceans and bogs, but simply atemporality. We're all right here. There's no where to go, and nothing to do. It's the extra-dimensional solution. If you fold a piece of paper in half, the straight-line that was the shortest distance between points on either edge is now a single point. The questions of how to talk about the future are no longer questions, and we can just live our lives.

But this is not to say that we achieve some sort of transcendental consciousness, and we are all part of a singular tao-like unity. Without worrying about the future you live your life – and living your life is not nirvana. There are still bills to be paid; there is food to acquire, prepare, and eat; cause and effect still happen. There is still history. There are days of the week and months of the year. But the questions of "what will happen when robots walk among us?" "what will happen when major world cities are flooded by rising sea levels?" "will we ever get to live in outer space?" all melt away.

Or rather, they don't melt away, but become part of everyday life. Which really, is a more coherent context for the question, anyway. Rather than worry about robots violating some sort of speculative, Asomovian Three-Laws, why don't we worry about the robots that already exist? Instead of worrying about action-movie tsunamis wiping out New York, why don't we worry about another Hurricane Sandy hitting New York? Maybe we should think less about the world of 2001: A Space Odyssey, *and think more about how we're going to continue studying the complex functions of our current world when NASA's budget keeps being reduced.*

Atemporality is not a call for increased realism. It is the understanding that the future is already happening, every day. The future is elapsing as we walk to jobs we hate, spend time accumulating luxury goods, and sit in front of television programs that aren't really entertaining us. The past is not simply a source text, but a panoply of ghosts, lurking inside of our technological black boxes and underneath the paving of our streets. The past is not a gone, hidden place, and the future is not a speculative fantasy. The process of history is happening all around us constantly, without ever ceasing, not slowing down or speeding up but simply happening. These are our lives, and these are our problems, all existing at the same time, now, without the curtains of years forward and backward, behind which we might conceal them. There is no escape, because there is no temporal place to escape to.

So what do we do about it? Short of quitting our jobs and building dikes, what is the best way to deal with our atemporal existence?

Bruce Sterling once made this example, which he called "astronaut luggage". It works like this (per my paraphrasing). You want to travel to outer space. But no one except the ultra-rich can afford to do so. Rather than give up, you make yourself some astronaut luggage. What is astronaut luggage? Who knows! It doesn't exist until you make it up! Maybe it actually has some functional relationship to space travel, or maybe it's your Samsonite that you glued a bunch of space-gears to so now it's spacepunk. The point is, rather than bemoan the state of history that you live in, live outside of history, within the bounds of your own creativity. And then maybe if everyone is carrying around hip astronaut luggage, space helmet under their arm, space ticket in their hand, that will be a second, present-tense front for technological development.

However, astronaut luggage is not always a good thing. Just because your solution is creative, doesn't mean it isn't a waste of time, or even worse, unethical. What if rather than fetishizing a space-travel world, you fetishize a colonial world of whitewashed high-Victorianism? Or what if we just pick a random corporation's future, and do their marketing work for them? Consider the Italian Futurists, who were some of the first proponents of this creative, atemporal existence. They wanted to usher in a machine-like future of loud engines and terrible power, but not in the future, today. (The today of 1909, anyway.) These guys actually advocated for World War One, because they thought it would be an awesome aesthetic to have massive industry smashing against itself all across Europe. They supported the Fascists in post-war Italy – the only group who really took aestheticization of war and technologized society more seriously than they did. They couldn't have known how all of this would end up, but at the same time, they painted pictures of diving airplanes, and Giocomo Balla even made "Futurist Tea Sets" in support of this atemporal cause.

This is the other, bigger problem. Talking and thinking about the future is a problem, but trying to do the right thing today and not fuck it up is a bigger problem. Especially considering how few people are genuinely concerned about it as a problem. The Futurists were so taken with their own aesthetics, that they supported plunging Europe into the two most deadly single wars in history. Where are the contemporary Accelerationists taking us with their aesthetics, one hundred years later? One shudders to guess.

* * * * *

This book is not the solution to any of these problems. But it is a sort of atemporal astronaut luggage.

What all of these stories have in common is that the distinction between reality and fiction is not important. That is to say, if these stories were speculative fiction, the distinction between the future and the present is not important. Or, the difference between this reality, and some other possible reality is not important. None of these stories are true, but none of them are false, either. These distinctions are not the point, at least not immediately. The difference between fact and fantasy are important, just not right here and now. In an atemporal dimension, all of these things happen simultaneously. Whether for good or ill, the speculation of these stories is speculation that occurs in the midst of this world, not outside of it.

These stories exist somewhere around us, in the present, among all of the otherwise normal aspects of what we call reality. These stories are dreams that I invented, for the purpose of trying to figure out what is real. They might be regular suitcases, which I have decorated to look like something that you could carry into space. Some of them are artificial mechanical Turk companions, which in actuality, have small people hiding inside. Some of them are fantasies, about what we wish we could do, and how much pleasure it might bring us. Others are fears, paranoias, things that are unlikely to happen but are not impossible, and so we continue to think about them while we lie awake trying to fall asleep. And there is at least one that is just a sketch of something I saw once, that I don't know what it is, and I couldn't provide any more detail than what I've hastily scratched out.

And they are all risks. They could be bad ideas. Or at the very least not good ideas. Or they might not be ideas at all, but psycho-

logical dreams, in which the content is not itself important, but how we might have come up with such a dream, that says something about our internal, psychical states. They might warp the way that we think away from how we ought to. They might put focus on things that are unimportant or distractions. Or they just might not be that entertaining.

But in everything, there is risk. There are problems everywhere, surrounding us so deeply that we can't see which direction we are heading, and where the path might lie. There are only problems, no paths. And in this deep confusion that we surround ourselves with, wander through, and sink beneath, a creative impulse should certainly never be held back.

Adam Rothstein
November 2014

About Apocalypse

FutureMyth Notes

Incantations of a Mythic Thaumaturgy

Let us do a bit of wonderworking here and set the scene with the scent of smoke from some theoretical pyrotechnics. This is very a much a gather-round-and-join-hands sort of procedure. But it is also the draw-the-sigil-in-the-turned-over-soil sort of procedure. I could just give you the reading, lend you my copy of one of Julia Kristeva's texts, and send you to the library. But this is exciting stuff, so I thought I would put a little bit of performance into it for you. I'm going to do a bit of verbal incantation, and this will hopefully make a virtual space for us, in which we can do these things. Let's push things back, and expose some flat earth in which we can move in. We are going to be building a bit of emotional space from the pieces of former ideas, which litter the ground around us. We are going to use them in an elaborate and baroque ritual. The rubble of a decaying mental infrastructure litters this virtual ground I am clearing off, and it is having some strange effects on our behavior.

We are going to kick up the detritus below our feet, and expose the myth. The myth is everywhere, sometimes in smaller pieces rather than larger, present under the dust and the moisture. We can dig them out, brush them off, and collect them in a pile. And then we are going to melt them down, dry them out, grind them up, and sinter them together. This is a metallurgy, a liturgy in the vein of thermoplastics, a parascience of material stressors, atomic diffusions, melting points of mimetics and belief. The books you could read on the subject will give you a different story, but this is the one I have here.

Myths sound inherently conservative, old, obsolete. And finding them buried in the ground might make us think that they are. They

are natural resources, found minerals, like coal or gemstones. But this makes them not old at all. They are as new and present-tense as we are. The time that passed before they emerged has catapulted them forward in time. From this atemporal compression, their present artifacts emerge into the light, rising to the surface for us to find today. Each emerges new, as if born into life, the former stratified epochs shed phylogenically, just as an embryo loses its tail.

Unlike other extractive mining of the planet, the supply of myths is unlimited, because they come directly from us. They are the remnant of our finite lives. They drop from our unconscious and ball into clumps as we kick them away, until they are compressed into new forms and uncovered again. Hoarding myths would have no purpose, a strategic reserve wouldn't help anyone. Myths only take understandable form when they are used. Their exothermic power must be released from their molecular chains, or else they simply become literary filler – worthless rocks, the simplicity of stories held in neat rows upon a shelf. There is a psychic phase change that must occur, if we want to translate these crystallizing structures into something worth using, molding, melting, burning, compacting, and then forming again. We must forge tools from these myths – the hammers and tongs, the saws and drills of myths. These tools can be used to more quickly mine more myths, and break them down. More minerals, more hardware. Whole buildings are built in such ways – homes, workshops, and factories. Out of the ground, and up into the sky.

Now that we have the space created, let's listen to the sound, blowing idly across it.

List of Technological Calls to Prayer

Across the void of the fully developed city, the grinding wail of the siren, which only the attuned can here. It is a low tone, below the frequency response of most eardrums, but it causes particular imaginations to resonate. Under the minaret, an empty ruin, waiting for someone to invent what will happen there. The books are closed and back on the shelf – we're looking out the window now.

This is a real city, and these empty spaces are real. This is every city on earth. These cities are filled with new buildings, comprised of blank walls, unpainted, left bare by their builders out of lack of desire. Once the space had been separated, the wall was deemed complete. And yet they remain, waiting, a blank space to be marked with paint, with ink, with fire, or kinetic force. Each wall is a moment that has yet to happen, in which hesitation left a silence void. We look out of the windows, and to the left and right of us as we trudge up and down the streets, and we have been taught to not see these empty places, and not to think of white space as a pregnant pause.

But each blank space needs the machines of myth to chisel and hammer at its perfect singularity, to create an un-architectural harmony across its pure undifferentiatedness. But too often, we ignore the call to perform this ritual. We simply think about the machines – we channel some Walter Benjamin, and then we go to sleep with the book falling closed on the floor. We wait for a better canvas, a better opportunity, a venue that we can afford.

The call of this ritual intends to be the end of all prophetic dreams. This alchemical practice aims to be the beginning of working-

through our myths in the street. There are small machines, eating at the base of the walls, installing themselves in the alcoves and alleyways, black market mechanisms of supply and demand, of gamble and reward, of investment and loss. The machines' noise rises in a chorus of calls, begging to have their levers pulled and their knobs twisted. Take the data they spit on you, and rub it into your algorithm. Reject the Like Economy and replace it with a barter system of curses and threats. Print your own sigilized business cards of the attention-investment elite. Pack all the instruments you have created from the material you've dug from the ground into lightweight bandoliers, strap them across your shoulders and put the best one in a pocket you can easily reach.

The technology is calling us out into the streets, but we ought not to wander out unprepared. There's a checklist of things to bring. These are some of the tools we'll need in the street. If you are missing anything, ask your neighbor or see what you can fashion from other tools.

List of Astronaut Luggage

On the desk is an itemized accounting of your astronaut luggage. Pack this luggage, and then forget it. Astronaut luggage is non-functional, all for looks. It is a Bruce Sterlingism, a way to think about approximating space travel without needing to pay for expensive, high class space tourism. It is the equipment, without the place to go. Like the toy rocket ships of a previous era's childhood myths, astronaut luggage can be made from cardboard, or it can be hacked out of Louis Vuitton vintage luxury trunks. It can be as cheap or as

expensive as you want it to be. And if one day it becomes actually feasible, this luggage could be used for space flight. Or, at least in our best estimation of what such plausibilities might actually require.

It is time to leave the house, to venture out into the streets. But while you were locking the door behind you, someone has stolen your astronaut luggage, thinking that it was valuable. Don't worry about it. Let it go. There's no need to file a police report, they wouldn't know what astronaut luggage is, let alone know how to find it. Our objects become more and more sentient each day, but that doesn't stop them from wandering away. These sorts of concerns occupy valuable minutes and hours, as we track the objects we have lost throughout our lives, and attempt to prevent losing those objects in the future. Forget it. Abandon your astronaut luggage at the bus stop. Leave it on the corner, where someone can find it who needs it more than you.

You didn't need the luggage anyway, because all the important myths were already strapped to your chest. The tools forged from myth, turning on and clicking to themselves as they sense opportunities in which they might be used. You can have all the future-oriented souvenirs and uniforms that you want, but they won't have a climate change liferaft in them. The real future-gear you will need is actually old – a no-power transistor radio hooked to a barbed wire fence, an idea of how to make a plow, and if you are lucky, a mosquito net to prevent malaria. Your myth tools are shining and new, but the design is time-tested, out-of-copyright, and beyond the history of any company or brand. Feel their solid construction, their simply joints and straight blades. The tools' moving parts whisper suggestions, their ergonomic handles mime ways in which your hands might use them.

Stop staring out the window. Jump out the window. Read and write only manifestos that actively block streets. Take photos of failed attempts at changing the world, rather than designers' renditions of only possibilities. Death to TED conferences. Show off the mythic tools to the TSA, give them explanations written from the remains of discarded old dogmas. Intercept MOMA exhibitions with your own counter-performance. Counter-perform gender. Counter-perform the police. Counter-perform the entire state, and set up your own as a joke. It's time to get out your tools, and go to work.

List of Street Hustles of the Future

Myths are dirty business! Why do we want our tools to be so clean? This street is full of garbage, while the walls are all blank and white. There's money to be made from every imbalance like this. There is a business opportunity on every block, and they don't need venture capital to get going, just an initial victimless theft. Myths are falling off the truck all over the city, people are stealing any piece of intellectual property that isn't tied down.

You have to want to survive in order to do so, not just attend a film about survival, not just backing it on Kickstarter. Prometheus, tied to the cliff face with liver exposed, got off easy, because he had pathos. A poem's worth of ambition just doesn't cut it anymore. Mary Shelley's monster has drowned, the icefloe melted away underneath it. There are too many poems, too many unified visions, too many narratives of sadness and truth. There are too many heroes, lining up to get in the parade. The smallest literature dies in a gutter and is forgotten, and that is its only saving grace. To not

be remembered is the greatest historical contribution, because you keep the ground unhallowed, with a thriving flora of bacterial and protozoan population, and there is no parade of swayable youths spending money on images of your likeness. Hustle faster, make the money, and leave before they remember your face.

These are not exceptional times of history! This is the exact same span of history as every other time, and you will die unknown. The myth tools make short work of the same old dangling rope, a bit of artisan's touch, and the myths move like extensions of the self. You cannot control the intellectual property, that is the work of myth. Capital and its narratives are a disease, communication happens through myth. Learn by helping others, because that is the way of myth. Spell things wrong, make irreplaceable diagrams that explain it all only at a particular moment, rely on artificial substances for every natural impulse. Throw up atemporal gang signs, because the No-Future punks all had to deal with getting old. Don't trust anyone who doesn't think they're fifty-five.

Time is of the essence, but because there is always more of it. The tools of myths create time, and lay it out ahead. It powers the machines, as long as we can get enough of it.

List of Atemporal Conspiracies

This is FutureMyth. Myths that create the future, myths that are from this created future. New myths, that will one day be old myths, fallen apart and recycled. New myths, that will one day be dead. Myths that will inspire new shapes and places. Myths that will break through a wall, be shot by the police, and die without anyone

remembering their names. Myths that will make a lot of money and fury, signifying nothing. Myths that will become new myths that will become new myths that will become new myths, because this is how it has always happened, at least as we understand it today.

You can see the shape of the tools in the edges of the artifacts that they made. The tools are long gone, but the cutting lines remain. The residue of place, of time, of the many exchanges of productive activity, the blood that fell out and washed into the cracks, the machines that were installed and the deals that were made, the time that was created and the lives that were lost. You want to know how the world really works? Then follow the myths. See how they attempt to convert the space and time in which we exist, the conspiracy against certainty, stasis, and security. The atemporal conspiracies run on pure myths, on the understandings and misunderstandings of street ritual. They break down the walls, and eventually crumble all our creations into dust, if we let them. If we help them. I hope that we do.

Gallery text from *FutureMyth* exhibition, 319 Scholes Gallery, Brooklyn, NY, 2013

Apocalypse of the Internet

When the end times of the internet finally occur, we'll realize that it had begun a very long time ago. Thirteen years after Y2K, to be precise: this is when the apocalypse of the internet was revealed. Any scholar of religion can tell you that the apocalypse is not the end itself, but the revelation of that end. The knowledge is leaked into the world, given to those who must try to continue existing with full awareness of this terrible eschatology. Like bookends, the beginning and the end of the world make its center whole. After the end is revealed, we are permanently affected by this tautology. The apocalypse of the internet is now, today, because now we know the ending of the story that is – in its telling – inevitable.

I'm no John of Patmos, no Daniel or Isiah. But I can tell you an apocalyptic thing or two: it is a slow death our internet is creeping towards. A death of the sort of slowness that only a vacant city can create. It is a street decomposing not under tank treads, nor under burning tires, but under the abstract erosion of no footsteps, no occupants, and no motion. You see, the internet is a city, and cities are very hard to destroy. A city can handle damage, as it erodes and degrades, concrete ossifies, and wiring slowly melts away. Cities can burn, they can be bombed with extreme satisfaction. But this entropy is nourishment to the body of a city. Its immune system, humanity, is just waiting to redevelop it. You can kill 99.9% of the population, but unless you convince that remaining 0.1% that the land is valueless and to pack their things and move, the city will, in some sense, remain. An information network's population is formed from similar nodes.

Human beings are quite content to live amongst rubble. But pave over a public square to make a highway, use the courts to oust every last tenant from a privately-owned public space, send the police

back every night with gas, clubs, and loudspeakers, and eventually the humans will find a quieter pile of bricks.

In 2013, the angels revealed the end of the informational world to me as a slow, steady eviction. They showed me people losing virtual riots, herded off the streets of the network, and into the e-malls and the iPrisons. I saw the tubes locked down one by one like the streets of Boston, as armed soldiers looked for the last terrorist on the internet. Those who stayed to fight were eventually knocked down. Those who moved inside to get out of the way became interested in other things. And dissent became a memory, rather than a possibility.

The angels brought out the seven vials: proprietary clouds, location tracking, wiretapping, big-databasing, keyword censorship, entrapment/imprisonment, and cultural silence. Each small pool of liquid not wetting any more than the bottoms of most peoples' feet. But with the introduction of consistent moisture, black mold is free to grow.

And so our culture slowly moved away from the internet, even though the data connections continued to exist. In the old communist bloc, the prices were low, but the shelves were empty. In the new capitalist bloc, the shelves are full, but an officer is writing down a list of anything you so much as glance at. The internet was always about exchange, whether in currency or ideas. But when the streets are locked down and the Dunkin' Donuts of the world remain open, the only people shopping freely are police. The rule of the post-apocalyptic internet is simple. Don't talk to anyone online. There is no one there. Don't share, don't comment, don't like, don't follow. Do your social elsewhere, out of the prying eyes of data and those who collate it. Don't access any content, because there is

nothing there except for the crimes that you could possibly commit.

The information networks gravitated back into physical space. There, we still have dark corners, the dead spots where cameras cannot see. In the dark of the bedroom, without a spoken word, a bit of virtual space for ourselves. A swapped disk with some text, a flash drive with a couple of GIFs passed under the table – these are the sewers we crawl through after the streets are paved with policemen. These are the emoticons made from hand signals we flash to each other in the dark.

The cryptography was too difficult for most people, the privacy settings too hard to grok. And so rather than hiding our words on the internet, we simply took them offline again, where they had always been. For the most technologically proficient, there is the occasional darknet rave party, set up in an abandoned e-business for a couple of hours, unplugged and dissolved into a back channel once the heat is felt around the corner. But most people simply found new piles of bricks to inhabit.

They looked suspiciously like the old bricks. Samizdat CD-ROMs with a compressed collection of songs were cheaper to burn and share, and less risky than connecting to the internet, and so the young folks learned how to zine again, just as easily as they had learned to blog. The wavelengths left vacant by unused cell phones were perfect for low-power analog TV transmissions, and so pirate "Youtube" stations shared response videos throughout the housing complexes. SMS were scrawled through the stairways, the light poles, and the bus shelters. Sexting through swapped SD cards, passed from one body to the next under the twisting serpentines of extended, steel-pierced tongues. Data made visible, shared through space, air-gaps employed in augmented areas – old emptiness converted

into new fullness, as virtualness decayed into panoptical vacuum.

The symbols of this city were re-purposed into new slogans of allegiance by party functionaries. Not a party in the political sense – party in the sense of app platforms. These engineers, so innocuously programming the bulldozers of surveillance culture, parading six abreast across the former People's Squares. The vials poured out Newspeak. "Awareness" was the sort of evidence in the prosecutors' files. "Scalability" was the motto of the state. "Openness" the password of the secret police. To be "social" was to inform on one's friends, to "like" was to follow orders. Lifestyles were truly "disrupted", and vacant of life. So many Pearl Roundabouts converted into security-sealed highway junctions. And the "New Normal" was silence. As if your life depended on it. Because it did. But no one was fooled into living in this New Normal.

And so we became refugees from the internet, adapting our old ways to the new reality. We stay up late at night playing games with small pieces of plastic, and strips of paper torn ourselves. The network is now a broadcast medium – we contribute nothing, and we are expected only to absorb. We keep the screen on, lest they know that we are not watching the ads as we ought to be, but we keep the volume down. We speak in the now illegal languages of microblogged misspellings and instant photo-share idioms. They sound like a localized slang, the parochial language of personal expression hiding below the gathering forces of monoculture. The books we read and the music we play – all of it is dumb, non-transmitting, non-sharing. It is culture that has to be passed physically, used physically, replicated physically. We copy it out by hand, record it over to blank media using a nest of wires from speaker to input, dodging DRM by dub. Piracy is rampant, if as convoluted as a drug scene, and entirely

hand-to-hand. Welcome to the age of mechanical analogs for digital reproduction.

The city that was the internet lies fallow, but in a perfect vision of shining steel and unstained concrete, a model without a population. It is a futurama terrorscape of perfect law and order, bereft of humanity, where the trains run on time and without graffiti but nobody rides them. But underneath the dense mesh of its wiring, in the pauses and gaps of its data pulses and algorithms, human life persists. The waxen figure lies in sepulcher, but outside the hallowed walls of that governmental mausoleum, hearts still beat, as data is swapped behind the back of lingering youths. In the bottoms of their paper coffee cups, in the saved cellophane from packs of cigarettes, in retrofitted costume jewelry, tucked into socks and waistbands, data moves as much as it ever did. Perhaps even more so.

The angels put away their seven vials, the revelation explained, their story told. The internet of today lay in permanent shadow of this future possibility, what had been a clear and crisp recording, corrupted by the ravages of algorithmic noise. “Cheer up, life goes on,” they say to us, snapping open a briefcase to reveal polycarbonate disks in clear envelopes. “Now, would you like to buy some new release DVDs?”

Originally published in *OMNI Reboot*

About Commodities

Chased by Google X

A few months ago, I built myself a fake pair of Google Glass. Back then, glass was the cyberpunk edge – the future of wearable computing, the chance for potentially augmented vision. Today, tech bloggers have worn them in the shower and taken photos for their stream. They've been reviewed and hacked. The first round of apps have been reviewed and hacked. But there was a moment when Glass was the V-2 rocket of consumer electronics. And like the US government, I was going to get myself a piece of that one way or another.

An old pair of reading glasses, some shaped balsa wood, and pieces of clear acrylic from the edge of a photo frame. Thrift stores are elephant graveyards for commodity goods. One step above having actually caught on fire: knick-knacks, appliances, stereo equipment, and AA-battery personal electronics join the heaps of consumer goodwill that saves these wonderful organ donors from the landfill.

With sanding and grinding, coats of paint and varnish, and long hours studying all the public photos of Glass that were available, I had my own gleaming wireframe of newness. My fake Glass were utterly non-functional. Except for that one crucial function – they made it appear as if I was actually wearing Glass.

I hit the streets. Underneath my dreadlocks, my counterfeit third eye gleamed ever-watchful. I stalked the city in my cyberpunk-black hoodie and boots, waiting to see what would happen. But nothing had changed. On the face of a white man in jeans and a sport coat, a face computer might appear as an odd addition, a grafittoed augmentation. But when a man with stainless steel hardware in his ears and twisted knots in his hair has an extra piece of plastic above his right eye, no one stops to look twice.

Until I met Apfel. Not her government name, but we never met on those terms. She watched me as I drank an espresso, pretending to type on her laptop. I had forgotten I was wearing the fake Glass at the time. The slight headache it caused me by blocking 15 percent of my peripheral vision was a dismissed push notification to my consciousness: just one more subtle wave of hangover, dehydration, caffeine or other substance depletion to try and ignore. She cornered me as I was coming out of the restroom. I assumed it was my hair, my T-shirt, or one of the stickers on my computer lid that she wanted to talk about.

"Nice counterfeit," she said with a smile.

I grinned sheepishly, fingering where the touch panel ought to have been. "Yeah, I had to see what it was like to actually wear them."

"And steal a little bit of that techno-magic back from Google in the process."

She asked me if I wanted to see more. "More fake Glass?"

"Counterfeits aren't fake. They just aren't quite real."

"Okay, sure. But they don't work."

"Don't they? Come see our workshop, and then we'll see."

She had me at 'workshop,' so we shouldered our bags and I followed her out towards the river. Down under the bridge and along the tracks, past the shipyards, and … well, the location isn't very important, and it's better if I leave out the specifics. Under the stairs, through a dripping passageway, pounding on a big steel door: the threshold to the workshop of the Group.

Apfel introduced me to the others in the dark, dungeonous hackerspace and showed me the altar. The shop was filled with machinery, work tables, electronics in various states of disrepair. In this,

no different than any other hackerspace. But at one end, there was a long counter covered in consumer devices, illuminated by candles and fluorescent work lights on counterbalanced arms, cutting through the gloom like a glowing vision at the end of the sub-basement. Not a single device on the altar was real. But what they actually were, defied easy categorization. Hollow plastic cameras and simulacra GPS devices, taken from window displays used to sell neoprene gadget shells and small rubberized baglets. Shanzhai phones by the hundreds, emblazoned with knockoff logos, Nokias and Motorolas, Blackberrys and iPhones. Design mock-up tablets made from panes of glass and powder-coated sheet metal over thinly glowing luminescent sheets, the remains of former storm window glazing still visible on the glass of half-finished items that had yet to be scraped clean and beveled. Full laptops that seemed to boot some sort of non-functional GUI, made from 3D printed plastic and scrap iron. And around each of the necks of this eager group of semi-hacker/semi-performance artists, a counterfeit Tamagotchi, each bleeping and glowing according to some sort of hacked, internal rhythm.

They explained the manifesto. Any device that was known to be approaching release, they would fabricate and wield in public. Their devices were seen in blurry street photos, profiled in gadget magazines of the highest order, spotted in the wild when by rights, they should never have been. They intentionally subverted the release cycle paradigm, and in doing so redirected the entire gray market of development, hype, and design. “Permanent beta techno-anarchism by the deed,” was the phrase I remember best, though this commodity insurgency was certainly permeated by the occult as much as any politics. Perhaps it was something in the incense smoke affecting my powers of reason, but there was a dark magic implied in these counterfeit devices.

Their work displayed the usual anti-corporate merit badges, measured in leftist buzz words and culture jamming cache. Every counterfeit device they made and used in public was a lobbed stick of dynamite at the Silicon Valley scabs, who had commodified the spirit of invention and delivered it up to the bosses. But there was a deeper symbolism at play. The devices they produced in this pseudo-lab were hexes, a transubstantiation of the spirit of consumption, simultaneously capturing the specter and setting it upon others. The market of gadget futures was a field of energy, invisible to anyone who wasn't ensconced in this culture. And the Group played with this metaphysics as if it was their own personal toy. There was an incredible amount of power invested in the development of the newest, the most cutting edge, the most must-have consumer devices. The Group was blackening it, stealing this occult knowledge for their own purposes, hijacking it into unholy loops that they were attempting to channel. They were sabotaging and rupturing the rights-of-way, meant to tanker-train this energy back to its owners. And if the Group were burying bombs under the tracks and lobbing them across the market square, then there were definitely Pinkertons out there, looking for them.

But there was little time to elaborate. The group was hot on the trail of Google's next device – something so secret, that it didn't even had a name yet. It was known simply by the same name as the company's secret product development lab: Google X. Whatever it was, the Group needed to get more information. They wanted a sample. A prototype, that they could get to work on. On the way back to street level and to their van, they asked if I wanted to come with them on a reconnaissance mission. Of course I did. Apfel handed me my own fake Tamagotchi.

"We've checked up on you, and we know you're not a Google employee. Not in any branch. That makes you part of the team."

I spent a few minutes wondering what exactly 'checked up' meant, without even concerning myself with the 'part of the team' aspect. But by that time, we were already heading across the bridge. I sat backwards in the van, in between boxes of broken devices, raw materials, soldering irons, cutters, and glue, looking behind us at the setting sun.

Three black Prius' came onto the on-ramp, and assembled abreast in the lanes just behind us, headlights off. Three identical LIDAR masts were visible, one on each vehicle. They were Google self-driving cars.

"Fuck! Who didn't transit their cell phone?"

The others had placed their cell phones in a paper sack as we left, and Leaf, the youngest member of the group, had boarded a municipal tram and taped the bag to the underside of a seat, to be retrieved later. We picked him up on the other side of the bridge. But I kept my old 3G iPhone, for which I hadn't been able to afford a working SIM card in years.

"Give it to me!" Apfel snatched it from my hand.

"But it doesn't have service."

She pulled a black knife-shape from her pocket, released a spring-loaded pentalobe driver, and activated a LED light.

"At either the bottom or the top, all the stacks are connected," she muttered while she worked.

Deftly sliding off the screen, she popped the ribbon cables off the boards with her nail until she had access to the antenna contacts. With the tip of the driver, she bend the metal back, and inserted a torn piece of her hangnail in the gap, breaking the connection. She

closed the phone and handed it to me.

"Fixed that for you. Don't ever carry an in-circuit antenna on a mission again."

The Google cars were closing in formation, as Wiggy, the driver, did her best to loose them.

"You got a shadow?" yelled Apfel.

"Airport access road and a private drive, two minutes out."

Shooting off the freeway and through a park over the grass, Wiggy increased the distance between us and the formation. The Google cars skidded and wavered at the deviation from marked roads, before the algorithm had them break the law to follow. We careened into the shadow intersection, the entrance to a darkened industrial park, and off the road twenty feet into a field. The Google cars sped past, like a three-segmented worm, riding each others' bumpers.

"A shadow is a weak spot on the Google Map," Wiggy explained. "This industrial park is too new. Streetview hasn't been here yet, there's no wifi networks in the area for mapping, and sometimes there's even a recently changed road layout if you're lucky. The Self-Driving algorithm has to go by active LIDAR alone, and tries to get back to the main road if it doesn't find what it's looking for."

Back on the road, we approached the port terminals. Supposedly a container was being off-loaded that contained an actual prototype. This was an internally leaked tip – very hot. With the RFID code of the container, all we had to do was go take a look.

We went into the yard through a hole in the fence, and Leaf deployed a directional antenna on the outside of a spring-loaded umbrella.

"Second row, third up. I think that's it."

He scaled the stack, and popped the seal and opened up the door. Just as he ducked his head in, floodlights illuminated the yard. Dark SUVs raced towards across the tarmac from every direction. Vests labeled DHS, ICE, and Google Product Enforcement appeared, but we had already ducked into the narrow rows of intermodal steel. I heard several loud bangs, saw Apfel toss a handful of what looked like tennis balls behind us, and I just kept running.

We stopped in the brush outside the fence, apparently escaped. "Were they shooting at us? What did you throw?" my adrenaline was being replaced by real concern as to what I had gotten myself into.

"No, that was us. Homemade smoke grenades. And tennis balls packed with IR strobes to kill their night vision. Sometimes the cheapest tech is the best."

Miraculously, we all made it back to the van. Even more amazingly, Leaf was clutching an unmarked cardboard carton slightly larger than his head. We sped back into town, looping around a bit to check for LIDAR masts behind us.

But we must have stolen the wrong box. Apfel, Leaf, and Wiggy took the thing apart, mapped the boards, even hacked it into loading a light Linux install. But it was far too understandable to be the Google X. The device was practically old. The edges too sharp, plastic with the wrong sort of finish, not enough metal on the bezel. Low grade LED screens, and no sensors or inputs or accelerometers that were anything other than what one would expect on just about any piece of consumer technology these days. It wasn't cool enough. It couldn't be it. It was simply a product, some sort of Internet-of-Things network node. This wasn't the real Google X. The magic was absent. The explosive newness, the spirit of invention, the dark

secret of product development: all were missing.

But the Group did not give up. They were fully committed to their agenda, believers in the means of commodity magic. True insurgents against the regimes of innovation, they would find some way to turn this windfall into a weapon. They stared at it, fingering its facets. Where was the edge? How would they explode this commodity, turn it inside out with Shanzhai ingenuity, and weaponize it into something that could, at least for a moment, imprint its image on the street?

And that is where I left them, plotting their endless battle, the Tamagotchi they have given me surreptitiously returned to the bench. This Group was a little too real for me. I'm not a designer, not in the long arm of the stacks or in the underground. My fake – my own little barricade, my counterfeit cobblestone under which I found a bit of unremarkable beach – is slung solitary, around my head. Not a hero or a smart bomb, it simply works, quietly, all by itself.

Originally published on *The State*

Killer Mag

The publishing and design communities now know that a printed magazine can not only be used to kill at will, but as a particularly efficient tool for political assassinations. While much has been made of this intriguing development (the general surprise being that this achievement in design was made by print and not electronic publishing), few have commented on the innovative aesthetic of the publication that pioneered this method. We'll seek to remedy this here.

Polymer was a large format magazine, printed on thick 120 gsm matte paper, to a length of 136 and 146 pages respectively, in the only two issues that were ever released. Most of the copies that were printed and distributed have since been seized, and so the work of Art Director Silvia Gladdis has not found the appreciation of a wider audience. It is widely acknowledged as true that peculiar technical aspects of both issues caused readers, first, to salivate an acute neuro-toxin, and second, prompted a targeted brain hemorrhage imbuing them with an overwhelming urge to approach certain elected officials and spit this poison in the face of certain pre-selected targets with gruesome effect. However, it remains that through the unique applications of the magazine format, the publication rose above its competitors to excel in a field saturated with slick offerings in recent years. Indeed, the magazine as a form is not dead, though some 57 innocent victims may be.

Several features of the design stand out, for those lucky enough to have been subjected to only the magazine's aesthetic effects, rather than its more murderous injunctions. The large, lush photographs that advertising art directors normally favor were eschewed in favor of stark line drawings produced only by in-house artists. All of the artwork was therefore, original, and provided a unique, uniform rendering of the magazine's contents. While advertising

firms originally frothed with rage at the injustice of not being able to maintain their branding standards in print, the "redrawing" policy was a cold-hearted gift, birthing a new, radical look of congruity. Critics of the magazine assaulted this move as mere "minimalism," but few have had the opportunity to fall under the raw power of this representationalist technique. It worked as cleanly as a surgeon with a scalpel, radically excising the over-logoed emphasis from the brand itself, and truly presenting the products' designs.

The typefaces of the magazine, also designed entirely in-house by Gladdis's handpicked team, were revolutionary for their ability to achieve a whitewashed indistinctness. Sans-serif faces often draw attention to themselves in their attempt to minimalize the amount of ink on the page, but the designers provided the perfect weight to the lines, allowing the words to insinuate themselves to the eye with guerilla stealth, while leaving the mind clear and unperturbed by the text. The means-to-an-end adoption of minimalism in design achieved a victorious blitzkrieg, while many similar attempts clogging the newsstands only manage rash adventurism.

Even the so-called "Pure White Codes" themselves, which were eventually determined to be the means by which the magazine inspired its readership to commit so many fantastic instances of brutal murder, had a quality befitting the publication as a whole. Upon opening the magazine, rather than seeing a blanked of ads and content filling every available inch, the reader's eye fell easily upon a cleansing blank page opposite each full-page advertisement, sequestered in majesty, apart from the other content. Though, of course, it would turn out they were absorbing more than that. Advances in biofeedback programming made these white spaces anything but empty. There, nearly imperceptible dots of yellow pigment shifted

the Pantone color value of certain areas of the paper just beyond the point of conscious awareness, at the very limit of human perception. These wide squares formed the pixelated sigils of Native Diencephalonic Visual Code, or NDVC.

Authorities have not released the means by which NDVC was originally discovered and designed, but what we know is that it is a native visual language that the brain responds to implicitly, bypassing its linguistic centers. Via these Pure White Codes, readers' brains became unaware weapons. Within hours of looking at the ads and the Pure White Codes, the toxin would begin secreting from their palates and they would hit the streets, searching out targets surreptitiously suggested in *Polymer*'s articles. When they located a politician, the reader would leap and grasp onto the target's head, spitting wildly, aiming for the eyes or other orifices. Even after being tased to the point of unconsciousness by the police, readers would claim that they had left their offices or condos merely to get a cup of coffee. The secret component of the design and messaging of the magazine was subtlety. While we are compelled to deplore this sort of coordinated political violence, the aestheticians of the world cannot help by marvel at such unity of form and content.

What was notable about the Pure White Codes in hindsight, is that *Polymer* was able to raise the bar on the selling of ad space from the aesthetic quality of a billboard to that of a first-rate gallery. The insidious commands the white space was allegedly issuing to the Pons of the human brain and their consequences seem like collateral next to this achievement. Typically, a magazine packs the ads in wherever it can in an attempt to generate revenue in the most efficient way possible. But the breakthrough discovered by the editors of *Polymer* was that the advertisement were more than twice as

effective when paired with a blank empty page.

Though the magazine is now defunct, the publisher is reportedly swamped with inquiries for advertising terms, and we see copycats even now, produced by designers who have heard this story of creative destruction. Look at the current cover of *Margin*, or the much-lauded center feature of last month's *Hallway* to see how the aesthetics of the Pure White Codes live on without the Codes themselves. The editors who originated the technique, unfortunately, are unable to produce future publications along similar lines, as they are currently incommunicado at the government laboratory facilities. The nature of their new federal contracts do not allow them to pursue side projects.

There are rumors of a "disarmed" version of *Polymer* going to re-release, supported by crowd-funding and a coterie of the magazine's proponents. This author hopes that we do see it in print once again; good design is to be cherished, studied, and imitated. Toxic or not, *Polymer* will lurk in the memories of anyone who still appreciates a beautiful magazine.

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About Drones

Cascadian Drone Ballads

Cascadian Drone Ballads are a style of folk music originating in the disputed territory known as Cascadia. They represent a cultural internalization of the impact of the American and Canadian governments' violent, technological incursion into this undeveloped natural terrain on the northern Pacific coast of North America, a identifying narrative device for those who live an off-the-grid lifestyle, and serve as a rallying point for activists fighting for Cascadian sovereignty both in the rural, mountainous areas and in the cities. This article will briefly theorize the music lineage of Drone Ballads and their context in the political and technological situation in Cascadia, and then illustrate this relationship as found in the lyrics of several songs in the Cascadian Drone Ballad style.

Cascadia

Cascadia currently has no sovereign rights as a state or territory, but its borders are generally viewed as encompassing the American states of Washington, Oregon, and northern areas of California, as well as the Canadian province of British Columbia. Different groups identify the borders according to their own primary locations and interests, but Cascadia is more a self-identification of independence and regional autonomy, than it is a desire for any particular historic regime, nation, or map. Originally known as an "bioregion", for its mostly unified terrain and environmental concerns among the eco-activists who popularized the term, "Cascadian Pride" has also been utilized by area sports teams, micro-breweries, and other businesses in order to promote themselves with a certain regional consciousness, and utilize images of volcanoes, snow-capped peaks,

salmon, and tall evergreen trees in their marketing.

But when marijuana cultivation was legalized across these three states and the one province, and the joint interdiction/enforcement operation known as Operation Green Perimeter was launched by the American and Canadian governments, pro-Cascadian agitation grew exponentially more serious. The governments' ability to monitor and tax marijuana cultivation in the mountainous and more remote regions was slight. Farms could be profitable with small crop areas scattered across the hills and valleys, where there were few roads open year round. Permits were purchased per quarter-acre, so it was quite common for a farm to purchase a minimal permit, and then exceed their legal footprint by sometimes as much as 50 times. Government estimates found that as much as one billion USD in licensing revenue might have been lost as grow operations exceeded their permits in those first years of legalization. To recoup this revenue, the Revenue Services of the US and Canada implemented the Unmanned Aerial Vehicle Monitoring Network that formed the core of Operation Green Perimeter. Over one hundred war-class drones were sent to Cascadia for the task of monitoring marijuana farms throughout the region, to ensure their acreage remained with the license they had purchased.

This sort of federal government surveillance was not taken lightly in a region already home to strong autonomous leanings. The notion of a separate Cascadian state quickly became popular in rural areas, as an antithesis to the federal government and the state governments that could not and would not stand up to the authority of the Revenue Services. The heavy tax imposed on cultivation operations was interpreted as unfairly targeting the rural farmers' trade, while pharmaceutical corporations in cities paid a much lower tax rate after

deducing against their corporate taxes. What began as autonomous hostility to the federal government eventually matured into open rebellion, with the amount of money at stake fueling armed insurgent groups that would attack ground patrols for the Revenue Services on back-country roads, building up weapons reserves, experience, and aggression in a very brief period of time.

After a brief period of open fighting with insurgents, the governments quickly won the upper-hand, and fighting subsided. The presence of drones in the air at all times made wide coordination between Cascadian-insurgent forces nearly impossible. The attacks on government resources continued, but were limited to sabotage, the occasional improvised explosive device, or ambush. The government eventually pulled out of the rural areas almost completely to limit their casualties in the publicly unpopular operation, instead limiting their policing to the shipments entering the cities, and to the UAV network overhead.

Drones

The actual number of drones on active-duty in the Cascadia region today are unknown, but analysts guess that the numbers are somewhere between seven hundred and one thousand, with nearly four hundred in the air at any given time. The drones fly at altitudes around 10,000 feet, and, according to the Revenue Services, their primary mission focus is mapping marijuana crops using a combination of visible-light spectrum and thermal imagery. Since the introduction of the geotag stamp system, which uses a combination of GPS tracking and RFID to track licensed shipments of marijuana

from the registered production location to the processing facilities, the drones track the legal shipments, identify and backtrace any shipments that do not have paid and licensed geotag stamps, and then seize and fine the latter when they attempt to leave the rural areas. This minimizes the vulnerability of ground forces, as they don't have to make incursions into areas where insurgents could strike.

The drones' technological incursion is everpresent, as is their main striking armament: air-to-surface Hellfire missiles. Since the end of the major ground operations against insurgents, the official rules of engagement stipulate that drones may only strike targets that can be verified to be involved in violent, anti-government activities. Critics of Operation Green Perimeter and the domestic use of military drones say that this is a very loose definition, and that anything from mixing a large batch of concrete to fueling too many vehicles at once have been used as cause to fire at ground targets. According to standard procedure, ground forces are supposed to go and investigate any drone strike location, to clear up the wreckage and make post-mortem criminal charges. However, in practice this procedure can be delayed indefinitely by the ground forces, whether on account of perceived threats, weather, or simple bureaucratic delay. In reality, as long as the drones destroy their target, the mountain valleys often immediately return to stillness after a missile has plummeted from the sky.

The Ballads

Cascadia has long had a history of musicians in the folk music

style, perhaps symbolized best by Woodie Guthrie's *Columbia River Songs*, written in 1941. Guthrie was commissioned by the US government to write a few songs about the Department of the Interior's hydroelectric projects on the Columbia River, running through the heart of Cascadia. Upon visiting, he called the region "a paradise", and inspired, wrote 26 songs. Other artists have been similarly drawn to the beauty of the region, and stayed when their countercultural, pro-environmental, and anti-government sentiments found a home.

Norteño music from Mexico arrived with the influx of immigrants at the end of the 20th Century and beginning of the 21st, and with it, the sub-genre of narcocorrido or "narco-ballads". These songs tell historical tales of drug violence and anti-heroism from the drug smuggling cartels. While few singers of Drone Ballads trace their musical lineage to narcocorrido specifically, the influence of the guitar-led, fast-paced, danceable sounds of Norteño is discernible among Drone Ballad musicians. As well, Drone Ballads have in common with narcocorrido the shared tradition of folk music acting as a vehicle for a culture's coping with everpresent violence. Another point of comparison is the car-crash ballad of the 1950s and 60s in the United States. Again, it is not a direct lineage, but the emphasis on the violent nature, and at the same time almost unpreventable and fated event of drone strikes, finds comparisons to those traditions of singing songs about violent episodes in wistful, almost romantic style.

Another subtle point of influence comes from anarcho-folk music, or folk-punk. Drone Ballads are popularly thought to come directly from this style of music, which carries the fast, aggressive versus-chorus motif of punk to acoustic instruments, along with po-

litical rage. However, this lineage is false. Folk-punk groups in the cities of Cascadia were some of the first popular artists to introduce rurally popular Drone Ballads to a wider audience, transferring elements of their own style to the recordings of Drone Ballads in the process. However, folk-punk is first and foremost popular with the politicized youth of the urban areas, whereas Drone Ballads originated in the rural areas, where drones strikes still occur, sometimes on a daily basis. This is the home of the style, and the lifestyle that is its inspiration.

Drone Ballads are certainly pivotal to the urban-based activists who organize against the governments' use of drones to police the Cascadia region. Certain tunes, like "Great Swarm of the Fourteenth" (see below), have become anthems for the Cascadian liberation movement that is gaining popularity in the cities. But this political popularity should be held in context with the original writing and performance of these songs. The songs were written by musicians who live in the strike areas of Cascadia. Despite the constant threat from the sky, they have chosen to stay where they are. Certainly, profits from cultivation are enough to draw many to take the risk. But the lyrics of these songs express more than simply dedication to a lucrative task. The violence, internalized, becomes a dedication to the land, and to the lifestyle of being a Cascadian. The lives of Cascadians, told through Drone Ballads, are the lives of stubborn individuals who look at living off-the-grid the way most view taking an umbrella when one leaves the house. These are the stories that the songwriters wished to tell, and the fact that these songs have proved popular with a wider audience simply shows that these stories find resonance and appreciation throughout Cascadia, and indeed, the rest of the world.

The Lyrics

One of the best-known Drone Ballads is perhaps "Blue, White, Green", which takes its name from the colors of the Cascadian flag. This song has been adopted by several Cascadian Secession groups as their unofficial anthem. The verses differ depending on the recorded version, covering various significant events of recent Cascadian history. But the chorus is the part that most Cascadians know by heart, and audiences always sing along when the song is performed.

Coast as wide, peaks as high, as
Prying eyes in the deep blue sky
Snows shine white, below thermal sights
We sleep as flames burn through the night
We will dream, of a Cascadia free
Without grey drones in the blue, white and green.

The words reference the colors of the Cascadian flag, along with their various inspirations in nature: the blue sky, the white snow on the peaks of the mountains, and the green of the forests. But the many references to drones, in and amongst the nature imagery shows the extent to which the current state of militarized surveillance has been internalized. There is a certain pathos in this acceptance, but additionally, a willingness to continue fighting.

Another song, "Great Swarm of the Fourteenth" is a narrative account of the infamous June 14th drone strikes in North Central Washington. On that day, twenty total strikes were made in one valley, resulting in 273 deaths, and an iconic photo taken by a New York Times photographer of eight separate tendrils of smoke twisting up

from the green forest, into the sky. This day of carnage directly resulted in the Bellingham Insurrection, later that summer.

Though the Insurrection was unsuccessful, this particular song chooses to memorialize the event that inspired that Insurrection, rather than the uprising itself. Ignoring the tactical and strategic mistakes of the response, the lyrics remember the pain and tragedy of the impetus, as a way of galvanizing resolve to keep going. Phrases such as "The day they turned our skies against us", and "we rise in smoke/the woods grow dark" typify the undercurrent of rebellion in Cascadian consciousness.

But not all Drone Ballads are entirely tragic. There is a good humor throughout many of these tunes, that are honest about the futility of the situation when the drone network above is so thick and merciless. They deal with the state of affairs with irony, and with tongue-in-cheek criticism. While not as popular as political anthems, they form a substantial sub-section of the Drone Ballad style, and a healthy component of the Cascadian narrative.

For example, the song "Don't Do Nothing" is told from the perspective of an overworked (in his perspective) marijuana cultivator, who sits on a hillside over a river, and enjoys a bit of his crop while watching a drone circulate above. He remarks upon the fact that he works so hard, while up in the sky the drones "don't do nothing". From the refrain:

Dams power irrigation pumps
pumps bring water up the hill
Water feeds the thirsty crops
And crops sometimes pay the bills
The drones don't do nothing
But sit in the clouds and watch

Another amusing story with a darker side is the tale recounted in "The Mountain Swimmer's Blues". The song tells of a man who wanted nothing more than to build a swimming pool on his property for his lover, viewing it as the height of commitment. He went ahead with these plans, despite the fact that concrete was hard to come by, and he lived on a mountain side where the swimming season was short. He dug the hole by hand, carrying heavy rocks, while his neighbors looked on and laughed. And then he started laying the foundation, bending rebar, and tying it together in the evenings. People started to think that he'd actually finish when he began to mix the concrete. But then a drone saw his work, and figuring that what could obviously not be a swimming pool on a mountain side was the site of a bunker, it struck with a missile, blowing up him and his pool. The song ends with the lover recognizing that the futility of his effort and his death by it, was indeed the commitment the pool-maker wanted to intend. It is not believed that this song was inspired by real events, though there are certainly no shortage of stories of drones strikes precipitated by only marginally suspicion actions, such as brick-making and road repair.

The previously mentioned song included particular geographic elements that are unique to Cascadia, such as the obvious instance of the mountain, but also tidbits about "working in the morning mist", and "cedar-bark loam". One standout example of another Drone Ballad that specifically takes pride in Cascadian geography is "Modoc Forest Service Road". The lyrics' narrative are about a woman who knew the fastest route from Clear Lake in the Modocs, all the way through the Siskayous to the Pacific coast. She would fly back and forth in her trusty red jeep, delivering news and supplies,

traveling by her secret knowledge of the old, poorly maintained Forest Service roads. The story intimated that perhaps she's done some secessionary work, or at least the Revenue Services had suspected. One day, as she was clearing a ridge and entering the open area of a lava field, a missile from a drone found her jeep. This song does have some relation to a true story – Monica Jauntai was a reporter covering the insurgent conflict in Cascadia, who was known for driving a red jeep. There is controversy as to whether she was killed by a drone strike or an IED, but the story of her death was widely told in the mainstream as well as Cascadian media. However, she was killed outside of Detroit Lake in Oregon, not near Clear Lake in California, so the relationship would seem to be only inspirational.

Drone Ballads tell of heroes, of famous events, and of beautiful, evocative places – but a thread of sadness runs through them all. Even those songs that are inspirational find their power in the drive to face the futility of the political situation in Cascadia, and the drone network overhead that shows little sign of ever going away. This is an important sentiment to vocalize through culture, and it is the reason that Drone Ballads have grown so popular as this conflict lingers on. There is little in the way of other uniquely original expressive culture in the hills of Cascadia, as the drones make public gathering difficult. But music can be recorded, broadcast, or played for a small gathering, our of view of the unblinking eyes above. And the power of song is timeless, in this way. As the narrator says in "Victoria Island Song", as he or she waits in vain for the return of a friend and lover from Victoria Island who will never arrive, because of the drones patrolling the open water:

Our islands cannot travel
over the sea
But songs are invisible to drones above
And can travel from you to me

A Preliminary Guide to Magic Forces Affecting Drones

Some common drone models were designed without backup safety features and rushed to war without the benefit of years of testing. Many accidents were triggered by basic electrical malfunctions; others were caused by bad weather. Military personnel blamed some mishaps on inexplicable problems. The crews of two doomed Predators that crashed in 2008 and 2009 told investigators that their respective planes had been "possessed" and plagued by "demons." - Washington Post [1]

A technological system as complicated as an aircraft could not possibly function without the help and blessings of the supernatural. The acronym PFM is well-known in aviation maintenance. When a system is plagued by errors and no reasonable solution can be found, the system is powered down and allowed to sit. After enough time has passed that the last echoes of electrical energy has been allowed to "evaporate" from the capacitance of the system, the switch is flipped back to on. When the system spontaneously works, the reason is easy to explain. The restoration is thanks to PFM: pure fucking magic.

The opposite of such saving graces are demons. Gremlins were first identified by Royal Air Force pilots in the 1920s. The term originated with pilots stationed in Malta and other Mediterranean countries, however the gremlins themselves are endemic to many regions. Pauline Gower wrote in 1938 [2] that Scotland in particular was rife with gremlins, armed with scissors, apt to cut the wires of biplanes when pilots were unsuspecting. Author Roald Dahl, who crash landed in the Libyan desert during his service in the RAF, wrote his first children's novel about gremlins, which was purchased by Walt Disney for development. Pilots originally suspected that gremlins might be working on the side of the enemy, but stories

would come to show that both sides of military contact were beset by similar creatures sabotaging their aircraft.

The idea of strange, invisible creatures plaguing the activities of human beings extends back beyond complicated technology. Religions around the world tell of various demons, creatures that are not human but are disposed to act like them, working for personal gain or in service to other masters. Demons are not always strictly evil, but are instead very willful, doing as they please with little regard to our wishes, unless we have learned the occult means to control them.

Jinn, demons of Islamic mythology, are said to be crafted by god out of smokeless fire, while humans were made from clay. But humans cannot control jinn: they only obey their own will. The jinn named Iblīs [3] was so willful as to refuse god's command to bow to Adam, and was expelled from Paradise to become Shaytan, or Satan. Certain sources also record this demon's name as Azazel, before the expulsion.

Azazel is also listed as one of the Watchers, angelic creatures from the Book of Enoch, a text no longer canonical under any large Christian faith. These Watchers were not expelled from Paradise, but were punished by god for having children with humans, and teaching them science, technology, and other crafts. Azazel in particular taught humans how to make weapons, as well as ornaments and cosmetics. Other Watchers taught them how to write and make paper, how to read signs and predict the weather, and how to study the heavens with astrology.

From this collection of instances of technologically-related cosmology, we might begin to theorize how these forms of aeronautic spirituality could potentially affect drones. Drones are a relatively

new technology, and so the amount of collected evidence about their interaction with supernatural and metaphysical realms is low. But if aircraft are commonly affected, we can imagine that drones will be no exception to the mysterious forces that plague our technology.

We can assume that drones, like any other aircraft, are beset by common gremlins. Gremlins, as we know, attack all aircraft without any allegiance to the particular combatants in an armed conflict. More traditional demons, however, could potentially be sent by adversaries against particular drones. But we must note that Jinn, which one might assume are native to the Islamic regions of central Asia where US military drones often fly, are not sent by anyone and chose the targets of any potential misdeeds on the basis of their will alone. Another factor we might consider are the possibility of angelic Watchers, like Azazel. It isn't mentioned in the Book of Enoch that the Watchers mastered the technology of drones, but given that they saw fit to teach humans a great many technologies that they didn't already know, we might suppose that they are a force that is pro-technology, in general. And lastly, there is the overriding power of PFM – a force perhaps stronger than any other spirit, operating in any technological system that is sufficiently complex, a category for which drones certainly qualify.

In this preliminary hierarchy of spirits, a logic begins to show through. The Watchers represent agents generally in support of humans efforts to improve and operate drone systems. They are aided in this by the non-agent PFM, which seems to generally support the coherence and function of complex systems, by allowing them to "just work" when they otherwise have not been functioning. On the flip side there are gremlins, an unspecific group of beings which attack control surfaces, satellite links, and camera interfaces wi-

thout prejudice. Where PFM saves the day, gremlins come to send it hurdling earthward, if humans are not on the lookout to correct the damage done by their teeth and claws. As well, humans need to be watchful for demons, sent maliciously by enemies – targeted weapons not unlike the drones themselves. However, there is also the possibility of jinn, spirits acting of their own accord. Who can say why a creature made out of smokeless fire would want to interfere with the flight of a drone, but as beings acting only out of their own will, drone operators would have to take that up with them.

We want to think that the heavens are empty. We imagine that there is nothing up above us but a boundless realm, an infinite frontier for the taking by anyone who can put the aircraft into it. But the spiritual airspace is already a crowded place. Even the first radio broadcasts were transmitted into a universe full of distortion and static, fighting against the background radiation emanating from the very substance of existence in order to be heard. Our drones enter a sky filled with previously manifested intentions. The force of gravity lies in wait, biding its time before happenstance allows it to pull our aircraft back to earth. For every armed drone we send skyward, there is an equal and opposite force desiring to explode it in mid-air. We would do well to remember that against the universe, we can have no asymmetric force projection. While it does not suit the supernatural realms to maintain a consistent ethical balance in the world, that doesn't mean there are no spiritual opportunists up there behind the clouds, just waiting for a technological pathway to allow particularly ironic comeuppance to glide back down the infrared laser beam, back towards its source.

Overall, the supernatural realm is not that much different from our own. Gremlins, Watchers, jinn, and magic all have their own

analogs within our own behavior. Generally, we are in support of technology, because it helps us. We also have an inherent aptitude for it and we can make it work. However, it also fails, often catastrophically, and we need to be suspicious of technology while we use it. We also use technologies against each other, and attempt to make each others' technology fail for malicious reasons. And technology often has its own motive lying within it. Regardless of for what purpose we design and use a technology, that technology will often develop its own purpose, that we cannot control or predict.

So we should not be surprised by the supernatural's effect on technology. On the contrary, we should be well acquainted with these sorts of magical ramifications within drones and any other technology, because we have been doing the very same thing to ourselves with technology, for as long as it has been around.

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[1] Craigh Whitlock, "When Drones Fall From the Sky", in *The Washington Post*, June 20, 2014. Online at <www.washingtonpost.com/sf/investigative/2014/06/20/when-drones-fall-from-the-sky/>.
[2] Cf. <http://en.wikipedia.org/wiki/Gremlin#Origins_in_aviation>.
[3] Cf. < http://en.wikipedia.org/wiki/Azazel#Azazel_in_Islam>.

Throwing Fire-Balls Like the Rest / Whitman and Drones

Though Whitman never mentions drones or UAVs by name, his work contains the unmistakable shadow of their presence. Like absent angels, hovering invisibly over the North American continent, the drone is prefigured in his poetry as inchoate desire: the desire for advantage in war, the desire to kill from afar, these national fascinations haunt his language.

Let us look closely at some lines of "Song of Myself", one of the poems in *Leaves of Grass*. Between the lines, their silhouettes become visible, along with the pixelated faces of small figures, and the aftermath of wreckage and prone bodies scattered across landscape come into focus.

Battles, the horrors of fratricidal war, the fever of doubtful news,
the fitful events;
These come to me days and nights and go from me again,
But they are not the Me myself.

Whitman puts himself, the subject of this song, in opposition to current events, to news of tragedies, both local and distant. They are not him, but they come to him, orbiting through his atmosphere, through the poetry he delivers. We relate to the news by remarking upon headlines of drone strikes, of new quadrotor inventions; the uncanny hovering of the future above us. And then we continue with our lives, because the drones are not us.

I find one side a balance and the antipedal side a balance,
Soft doctrine as steady help as stable doctrine,
Thoughts and deeds of the present our rouse and early start.

This minute that comes to me over the past decillions,
There is no better than it and now.

What behaved well in the past or behaves well to-day is not such wonder,
The wonder is always and always how there can be a mean man or an infidel.

Between the excitement, controversy, and uncanny, lies the poet, at the balance. The government defends drones, in part by addressing the balance of evil with good, the balance of tactic with tactic, this scale of strategy and justice. Technology evolves regardless of ethical considerations, which often struggle to keep up. Decisions are made day after day, justified now, and in the future. This wisdom of it all is as much a mystery to Whitman as the passage of history.

Hurrying with the modern crowd as eager and fickle as any,
Hot toward one I hate, ready in my madness to knife him,
Solitary at midnight in my back yard, my thoughts gone from me a long while,
Walking the old hills of Judaea with the beautiful gentle God by my side,
Speeding through space, speeding through heaven and the stars,
Speeding amid the seven satellites and the broad ring, and the diameter of eighty thousand miles,
Speeding with tail'd meteors, throwing fire-balls like the rest,
Carrying the crescent child that carries its own full mother in its belly,
Storming, enjoying, planning, loving, cautioning,
Backing and filling, appearing and disappearing,
I tread day and night such roads.

Cloistering oneself from the realities of drones is not possible. To live in America is to participate, to be, in some way, culpable. We become the drone, omnisciently observing the cosmos. To stand at night, looking upward, unsure if the dim lights above are stars or

secret military satellites, if the dark spots in between the stars are empty or full of aircraft – this is now the way we look at our world. A god's eye-view, coupled with the algorithm of madness and wonder that guides us. Drones are part of the landscape – nature and technology inseparable.

We are approaching some great battle-field in which we are soon to be engaged,
We pass the colossal outposts of the encampment, we pass with still feet and caution,
Or we are entering by the suburbs some vast and ruin'd city,
The blocks and fallen architecture more than all the living cities of the globe.

Whether this battlefield is simply a metaphor for conflict or actual violence, we seem to be approaching it in space and in time. The suburbs, the signs – these temporal outskirts – are visible all around us. The rubble, the midden of former civilizations we have built and made obsolete, are displaced both by high explosive blasts, and by the mental and emotional warheads that strike with concussive waves of terror, counter-terror, fascination and outrage.

I am the hounded slave, I wince at the bite of the dogs,
Hell and despair are upon me, crack and again crack the marksmen,
I clutch the rails of the fence, my gore dribs, thinn'd with the ooze of my skin,
I fall on the weeds and stones,
The riders spur their unwilling horses, haul close,
Taunt my dizzy ears and beat me violently over the head with whipstocks.

The poet's captivating description of the pursued, cut down by

those with legal right over the quarry, speaks loudly of the brutality of systemized violence. His willingness to frame himself in the role of victim is a window upon the target of a drone strike, pursued from above by marksmen dispatched by an asymmetric sense of justice.

I take part, I see and hear the whole,
The cries, curses, roar, the plaudits for well-aim'd shots,
The ambulanza slowly passing trailing its red drip,
Workmen searching after damages, making indispensable repairs,
The fall of grenades through the rent roof, the fan-shaped explosion,
The whizz of limbs, heads, stone, wood, iron, high in the air.

Even as he places himself with the victim, Whitman also places himself as the aggressor. He watches the same camera as the drone pilot. He observes from the omniscient point of view, the aftermath of the strike, as survivors repair, and remove the dead. And then once more, the shot comes again – the so-called "double tap." Unreal destruction is cemented in memory, even as one wants to forget.

Were mankind murderous or jealous upon you, my brother, my sister?
I am sorry for you, they are not murderous or jealous upon me,
All has been gentle with me, I keep no account with lamentation,
(What have I to do with lamentation?)

I am an acme of things accomplish'd, and I an encloser of things to be.

My feet strike an apex of the apices of the stairs,
On every step bunches of ages, and larger bunches between the steps,
All below duly travel'd, and still I mount and mount.

But the poet is no victim or criminal. He is all the events of history, of all that he has witnessed, of all that he can dream of having yet to be. This angel of history walks with each footfall defining the

pace of an age. The angel cannot see the future – he must look at his feet. And yet, he walks. The poet as scribe and witness cannot be judged, except in his position as watcher and writer.

Do I contradict myself?
Very well then I contradict myself,
(I am large, I contain multitudes.)

In applying Whitman's words to a contemporary phenomenon, do we focus on the future he omitted, which he never could have envisioned? Can we judge a people, a nation, or a poet for what they have yet to do? The attempt to be timeless means that time is no alibi. But the multitudes of people, places, and times will never be singular, and will always contradict. There would be no judgment if those responsible could not be held separate from the not responsible.

Whitman knew of many spectacular things, but the contradictions we face in looking at the technology of drones was not one of them. His humanity, his America, and his time were guilty of many crimes, but not drone warfare. And yet, the fever dream of the drone was nascent in that America – in its people, its Presidents, its poetry. Whitman and his poetry do not contain drones – and yet among the multitudes, they contain so much of other things of which we have yet to envision in the skies above.

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About History

Name of the Games

The land rises over the horizon just after dawn. I was told that I should see it this way, and so I am on the bow, feeling just the slightest chill in the breeze as the dark sea rises up, bubbling slowly to form the island ahead of us.

Before I know it, we are upon the island with its rolling green hills looming in front of us in the rising light, mountains extending up through clouds. The white buildings of the port look pink, ringing the narrow harbor ahead of us like a string of lights being turned on.

On the other side of the world on a different day, I approach by train from the airport. After transferring at a station in the middle of pastures, the original train departs into the sprawling city, obscured on the horizon by dirty air. I board another train with uncomfortable wooden seats and in poor repair. After a half-hour delay, we lurch to a start. Out the window, slums fade away, replaced by farmhouses and cloisters, no doubt quite like my destination, which lies down a dirt road from a lonely depot somewhere ahead.

My separate journeys to the island of Catan and the landlocked nation of Carcassonne are related because we have made them so. These two lands export entertainment and community. Their economies and politics make possible the board games that families and friends play around their dining-room tables. They are game-nations, which exist only while the power of our minds gives their societies support.

We hear so much about these places, and yet we know them only through small bits of wood and paper. We read flat descriptions of historic port systems, of the building of new roads, of mountain villages in virginal ecosystems, of sprawling Kowloon-like architecture, and of religious and political intrigue.

But most people who play these games, like myself, know very little about what it is like to live Catan and Carcassonne. I decided to visit and see for myself.

Lay of the lands

My ship to Catan docked at the busy brick-exporting port on the north side of the island. From there, I took a jeep across the headland roads until I reached the village where I had arranged to stay with a local family. The cities of Catan are fairly modern metropolitan areas, with new development built with the money from exporting the many goods produced there.

But most of the island consists of small villages that have not benefited from industrialization. This is where the wealth of Catan originates, and hardly any of it returns. The island's interior roads are few and poorly maintained. Opportunities for education and advancement are only in the city. However, there are recent innovations, like cell phone service across the island. This is the Catan I wanted to see.

Taking the train through Carcassonne, it was clear that this was a vastly different place than Catan. The population is massive, and much more urbanized, living in sprawling cities and slums that have been there since ancient times. But the economy still struggles to recover from the war some 40 years ago with the neighboring nation of Stratego. Relations are still hostile, and lingering sanctions on key industrial equipment and even the occasional unrecovered land mine have made it difficult for Carcassonne to get back on its feet.

The various cartels and strongmen that control the country make

new infrastructure projects difficult to get off the ground. Planned development free zones have lapsed into favelas, and pork barrel road projects turn into winding, circuitous "Roads to Nowhere," eating up what public funds exist and making local travel a nightmare. In Carcassonne, I stayed at an inn on cloister land outside the sprawl because I wanted to see the scope of the problem from the outside before traveling into the heart of it.

Six sides to every story

In Catan, I stay with Hex Hallaggen and her family. Hex, a common name in Catan, is the matriarch of a family of six: she, her husband, his mother, and their three children. Their family has lived on the island for at least six generations. They feel no need to count back any further. Their forebears immigrated to work as sheep herders for Catan Livestock Exports, the company holding the husbandry monopoly, and they have have continued at it. Their village also makes brick and mines coal, which they ship out weekly on the company trucks that rumble through the village.

Everything in Catan is considered to have a relationship to six other things. Some are obvious, some not so. Hex thinks that I have a relationship to my homeland, my notebook, my camera, to Catanese polenta (of which I'm admittedly very fond, served with sheep cheese and local herbs), and two other things she would not divulge. She would only mention them, and then click her tongue as if she were my mother, and continue with what she was doing.

Hex has done very well in guiding her family. They are one of the most prominent sheep rearing families in the village, and others

look to Hex with respect and for advice. Because she has taken me in, they trust me by association. I watch as they mold bricks, and weave soft woolen cloth for their clothing.

This is a hardworking society. Times are clearly good. There is plentiful food, frequent social events, and homes are kept in decent repair. They are especially proud of the cell phones that have allowed them to get better prices on their sheep by organizing with other villages against the monopoly.

They also showed off the village's diesel generator, which the Hallaggens and several other families financed and bought themselves, running it for four hours a day in the evening. But I also feel an impatience with the dynamics of the island.

The Catan Knights, the police force on the island, is corrupt, and graft-supported banditry in the form of local "tax collectors" is rampant. The island's small size leads to a sort of equilibrium of this daylight robbery, and no one is persecuted to the point of starvation. But the villagers certainly seem tired of the game, and can see the difference between how the merchants and Knights live in the cities and work in the "tiles" (local slang for the boonies).

The trade must flow

In Carcassonne, the sprawling square plots of cloister land are much more beautiful and peaceful than life in the city, but it feels vacant. In the inn, I meet one of the few remaining farmers who is traveling to the city to sell his produce, and he offers to take me in with him. His name is Quad Tornimont. (Quad is also a very common name here.)

After paying the tolls, we enter one of the nearest sprawls in his ramshackle truck. In the cities, the air is hot, and the maze of streets teem with slow-moving traffic. But there is a certain beauty to these favelas and a liveliness and vitality not present in the surrounding country.

Quad introduces me to his cousin, who is training to be a City Knight; in Carcassonne, this is a kind of a low-level bureaucrat. We meet in a café underneath an apartment block still showing signs of damage from shells some forty years after the cease fire.

Quad's cousin and his friends are drinking strong coffee and playing seemingly endless rounds of droits, a type of square dominos that also double as a fortune-telling practice. They are placed on the table according to matching pips, and then the overall shape is interpreted. After teaching me to play, Quad reads my droits: He says that I'm an honest man, who can't find his own home, and so must travel.

Quad complains about the roads, which Carcassonnienes complain about like most complain about the weather. The matter seems more vital to Quad, however, as the roads are the only way he can sell his produce. He tells me that if his truck ever broke down, he would starve to death, as spare parts are nearly impossible to get.

The cloisters are supposed to maintain the roads in their locality, but they only care about real-estate consolidation and collecting rent. They outsource the job to the cartels (the "highwaymen", residents call them) who provide kickbacks to the cloisters in order to do little or no work.

His cousin complains about the bureaucracy. He knows there is little that a low-level Knight can do, because the cartels are the ones who control all the building contracts and the public funds. But it is

a job, and he hopes that perhaps the connections he will gain will let him start a business: either a café, or an electronics shop.

With the jaded attitude of any city dweller, Quad and his café mates know whom to blame for Carcassonne's corruption, but there is little to be done. They appeal to me briefly, saying that as a foreign journalist there must be something I can do to bring international attention to the issue. But then they admit that I am hardly the first journalist to visit, and what is any journalist, even one from the game-playing countries, going to do against the highwaymen? "You are just the highwaymen of a different sort of road," Quad's cousin tells me. He apologizes, acknowledging that Quad says I'm a good person. But I can tell he means it, in a certain way.

The "Game-Players"

My hosts know that it is our dining-room entertainment that sustains their societies, and that their lifelong labor, for us, represents only moveable chits of a great game. They patronize me, because my presence is patronizing to them. Hex said to me once, while talking about the amount of sheep they sell in a year, "I would like to tell a Game-Player like you that it will always be this way. But these resources doesn't just grow at the roll of the die."

I only seek to tell their stories, and I have the ethnographer's excuse going for me. I am not like the Carcassonne priests in the cloisters or the Catan merchants literally dictating their every move across the land, and benefiting myself by local corruptions. But I am also here only because others are interested in exporting their stories, and that is its own form of colonialism.

The reality of Hex and Quad's lives, we will never know. Quad toyed with me on one of our rambling drives across the Carcassonne countryside, asking me how many cities I had personally built. I told him I was a journalist and not an architect. He responded, "But our cities are only stories to you, aren't they? You build them in your notebook. Otherwise, they don't exist." He laughed, and slapped my shoulder, as if I could never fully get the joke.

Even as my hosts view me as an outsider and a higher class, they are grateful for my presence. Their greatest fear is that one day we won't care about their lives and their development and that no one will build up their stories. Because without these stories, they will cease to exist. That is what made me the most uncomfortable.

Tally the points

In the words of Hex, the hexagonal relationships of the world already exist, and we have to live upon them, laying roots where we sprout. She has done well for herself and her family. But I can't help wondering if they would have done as well without firmly established roots in the tiles. Not to diminish any of the Hallegen's hard work, but if things were reshuffled, or if the bandits got too greedy, what would happen to them? The island of Catan is beautiful, but both winners and losers are made here.

Quad tells me that he's watched Carcassonne change, watched his family move into the cities, watched things alternate from bad to good and back again. The land doesn't so much belong to him as he belongs to it. Carcassonne grows underneath him, and he can only respond by rolling with the changes.

In the end, it almost feels to me as if he is too willing to blame fate. I wonder if he blames the droits more than the highwaymen, clergy, and architects whose mistakes have been forced upon this population. Maybe he does. He can at least handle the droits on the café table, while the real power is always out of reach.

In my time with the denizens of these two lands, I have found that both their ways of thinking are right. They can only live on the tiles. But who arranges them? I am not sure. I return home, and they continue to work. The great games continue.

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Letters to the Moon

This article is about the NASPS book. For other uses, see the disambiguation page. Information in this article may not be relevant. See the Talk page for discussion.

Letters to the Moon is an art book project, being published by the National Aeronautics and Space Postal Service's (NASPS) Media Directorate in spring of 2030. It is a celebration of NASPS' 15 years in robotic mail service, containing scanned copies of undeliverable letters sent to the moon, as well as a collection of space photography.

History

The history of robotic mail service began as holiday prank in 2014, when a decommissioned Mars rover was used to deliver gifts in the neighborhood around the Jet Propulsion Laboratory (JPL). But when it was discovered how easy it was to program a robot to delivery mail into a door slot, a study was put together by JPL and what was then a separate government agency called the United States Postal Service (USPS). Studies concluded that by exploiting current robot technology – developed by what was then called the National Aeronautic and Space Administration (NASA) and research divisions of the Army – mail could be cheaply flown in bulk from handling facilities to decentralized distribution "post-box" points. These were delivered via autonomous aerial drones, then picked up from the post-box and delivered by less autonomous, remotely-operated ground vehicles: a so-called net-to-point model. This model broke with the conventional wisdom of the time, which was to use semi-autonomous aerial drones for point-to-point deliveries – a much more complex and fuel-expensive task. The combination of standardized, repeatable air missions and more improvised wheeled

missions better utilized that era's sense-and-avoid aerial technology, which was putting unmanned aerial systems (UAS) into the National Airspace (NAS) at that time. The net-to-point model was only possible because of the remote-controlled ground vehicles developed by NASA for space exploration. This coupled with their systems control and quality assurance processes from manned space flights, until more fully-autonomous ground vehicles were developed.

These provisional studies led to the first Automated Sunday Delivery pilot program in select areas in 2015. This program graduated into the Secondary Drone Delivery (the word "drone" adopted for PR reasons) in spring 2016, instituting evening mail delivery for all customers for the first time in the US. Within 10 years of the Federal Aviation Administration's "Drones-Go" date that allowed drones into the NAS in 2015, mail robots – now known to the public as Drone Post – were the primary source of drones in the NAS, and on-call delivery was available up to seven times a day for all customers.

The ability to call a robot to one's door in less than 30 minutes, and send any mail piece up to five pounds anywhere in North America in under 24 hours for the cost of a first-class stamp, created an infrastructural revolution in the United States. In addition to causing the fusion of the former NASA and USPS into the NASPS, it has made the US the leader of the robotics industry in the entire world. And it has ushered in what is being popularly called the "physical information economy," where the rapid sharing of re-writable storage media handles the heavy data loads the internet was not designed for, and with much improved security.

NASPS has become a hero agency to the United States people. The young engineers who cut their teeth on drone mail command-and-control servers graduated from the International Space Station

(ISS) with the best drone network skills on the planet. (In the 20th Century, it was mostly Air Force pilots who were recruited to become astronauts.) Winifred Olgama, the postal inspector who caught the Postal Drone Killer in 2019, is now the head of the Near Earth Asteroid Defense grid and outspoken proponent of societal robotics. She was listed as the "Primary Inspiration to Young STEM Graduates" in a recent nationwide poll. NASPS' massive profits are reinvested into the agency's scientific missions, which has led to a resurgence in space exploration, emerging from a past when funding for NASA was dwindling. NASPS has been financially independent of the general US budget since its official fusion in 2021, and now offers inter-agency bonds to the military and other agencies using its long-term capital investment fund.

In 2025 NASPS became responsible for assimilating the public-corporation Amtrak service into its operations, which became known as NASPS Rail. The roll-out of self-driving sleeper cars stumbled on several technological challenges and drew criticism. But after initial hiccups, the ability to order an electric-drive private compartment to your door, which then travels on open roadway to join up with and seamlessly board a moving rail train at 60 miles an hour, delivering you to any destination within 2000 miles in 24 hours, proved too good to the public to resist. With the addition of sub-regional commuter lines to the national rail grid, over 60% national road traffic was replaced by NASPS Rail, while 85% of vehicles on the road today are NASPS Rail compatible. And since all cars, even antiques, must make use of new Postal bridges and roads, it is often claimed that the ability to "mail yourself" via the NASPS Rail system was even more revolutionary than Drone Post.

Today, NASPS continues to expand. The Future Logistics Re-

search Directorate is making strides in improving sea-based robot service to the unincorporated Gulf territories of Libertara, the formerly independent off-shore seasteads. Since their agreement to start nationization procedures in the so-called "Tow-In" hurricane disaster relief of 2028, the NASPS instituted weekly mail service to the floating cities. Uninterrupted Drone Post service will do wonders to help re-invigorate these economically depressed areas, and help them rejoin the continent.

Letters to the Moon publication

2030 marks the fifteen-year anniversary of Drone Post, and the five-year anniversary of NASPS Rail. A commemorative first-class stamp will be issued on January 1st, 2030, featuring art by internet remix artist &#*, resampling the classic Postal Service "Liberty" stamp with a visage of Ikhana, the first widely-used NASA drone. Originally designed as a military drone, the Ikhana was the forefront of the evolution away from military robotics in the early 2010s.

The NASPS Media Directorate is also releasing *Letters to the Moon*, an art book featuring a selection of mail the public has sent to the moon. Since NASPS started service to its moon research stations in 2027, the public has sent millions of letters there without correct information for an addressee, just because they can. These letters are stored in sub-orbital processing carriers, and then returned to earth. But the Media Directorate began collecting art that was sent misaddressed to the moon, and is publishing an app and full-color book featuring a selection of this drone-based folk art. As well as, photography of the moon and earth taken from orbit by their

employees. You can pre-order *Letters to the Moon* now. Scan the code to proceed to the NASPS Storefront, or call your local Postal Drone for a complete catalog media card.

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Visiting the 2039 World's Fair

The lottery line to get into the 2039 World's Fair is the longest of all world-class events in recent memory, with over a billion applications. I won't be attending, as I am still on the FBI's No-Tourism List for unknown reasons, though my fifth appeal is still pending. But I have seen the preview trailer for the Fair. For those of you lucky enough to get tickets, here are some things you have to look forward to.

The film begins with an opening shot of New York City from the air, approaching the Manhattan skyline from over the condo-belt of Brooklyn. The credits rise up from between the skyscrapers of the island, rendered in self-assembling animated 3D, borrowing a liquid, morphing style from the popular "ebooks_punk" sub-genre of music videos. They read:

Your Visit to the 2039 World's Fair

Quickly followed by the logo for Partikal, the augmented-reality media company who produced and funded this infotainment film. The music drops a minimal tech beat, at a high RPM to reference the quick pace of the future in the oncoming latter half of the 21st Century.

The voice-over begins:

You've seen the viral trailers, and you've faved the virtual harbor-impact statement fly-throughs. But now the Fair has begun, and your lottery number has been notified. You are going to the 2039 World's Fair! Here's what you can expect from your visit to the future.

The camera switches from montages of future-forward city views to the location of the upcoming World's Fair itself. We see the massive pavilions, done in the latest component-architecture styles by the world's most famous architects, floating on their pontoons in the newly renovated part of the harbor that once was Battery Park. The camera angles follow the long arcing bridges and hermetically-sealed waterproof subway tunnels above and below the surface of the water as they lead to the Fair archipelago, in the characteristic dipping views of a quadrotor camera. Upon arriving at the islands, the camera pulls back and hovers, before spiraling around the central security tower rising from the buildings like an axis, which also doubles as the architectural augmentation projection structure for all the pavilions. The clever observer will note that the tower visibly bears the logo of G4S-Kodak, the contracted surveillance company for the Fair, and a conglomerate-sibling company to Partikal. Wheeling back around to see the Fair with the city as backdrop, the next line of credits unfolds from the buildings around the Freedom Tower Sea Wall:

Getting There

And the announcer who, come to think of it, sounds a bit like a young Dame Tilda Swinton, continues:

If you were fortunate enough to be drawn in the lottery and plan on driving to the fair, your car's registration has had the waypoints for auto-parking forwarded to its inbox. For those taking the subway, you will show your ID at the Canal Street checkpoints like normal, and then be allowed to transfer to the special Fair line extensions.

The film shows shots of Homeland Security troops at the Canal Street wall, and happy, attractive Fair-goers passing through the turn-scanners and boarding a very clean MTA train. Then we see a self-driving car inserting itself into a parking lift after its occupants have deboarded, and then a crowd exiting what appears to be that same train car, and walking across the enclosed viaduct to the system of bridges connecting all the pavilions.

The Main Pavilions

Announcer:

The Fair's corporate partners have commissioned the finest architects, designers, technologists, and entertainers to show you a glimpse of the world they will create in the later half of the 21st Century, target date twenty years in the future, or roughly 2060. Here are some of the exhibitions you won't want to miss.

Most notable in my opinion, are these highlights.

Foxconn Pavilion

The Foxconn Pavilion is designed by the same component architecture firm who did the famous Live-Work Bridge, more popularly known as the "Lego Bridge" in San Francisco, and the same disassembling, reassembling cube-structure is the primary feature. But here the cubes are larger, and therefore their motion looks that much more impressive. Inside, you'll find the latest visions of Foxconn's cell phone wizardry, and a feature film called "Light", that shows

the consumer electronics company's vision of the effect of miniaturization on the next generations of gadgets.

Facebook Pavilion

After logging-in with their credentials, visitors will be invited to try Human Network, the social media corporation's latest feature to their app ecosystem. On comfortable immersion couches designed by Microsoft, users can see what it is like to have their five senses directly connected to those in their select group of friends, for mutual pleasure / pain feedback via a innovative, homunculus-mappable interface. Then, pavilion users can feel free to Like any number of potential products that will become mandatory for all Facebook users over the next twenty years.

General Atomics Pavilion

The General Atomics Pavilion is notable for being built to look like a large-scale version of the flagship MQ-66 spherical UAV, and what's more, the building actually has a functioning neural net of a MQ-66 controlling all the pavilion's functions. Regular-sized MQ-66 drones have been deployed throughout the Fair, fitted with a tour-guide pod on its hardpoints. It is assumed that as a major sponsor, General Atomics has also been contracted to deploy MQ-66's with standard weapons packages outside the archipelago for security, but these details are not being made public for obvious reasons. But as usual, security-tasked drones will not engage with the law-abiding public. Feel free to approach any visible MQ-66 inside the archipe-

lago with questions about the Fair, or ask one to watch your children for a few hours while you explore the Fair by yourself.

The Toyota Pavilion

With the most hyped special effects presentation at the Fair, the Toyota Pavilion is a must-see. The 360-degree True-3D hypermedia film, entitled "Futurisma", invites the viewer into what is called a Massively Multi-fantasy Online Dimension. The MMOD is a vision of the East Coast megalopolis in 2060, when personal transit is a thing of the past, and Toyota Telepresence allows us to travel without moving. The film was produced by the James Cameron Corporation, and though it was rampantly over-budget, by all accounts it was money well spent.

The Google-Peranto Skybridge and Garden

While Google's new speakable human language, Google-Peranto, has not had the adoption rate that the company had hoped, those who have devices fluent in the language or speak it themselves would enjoy walking the Skybridge and Garden, where they can converse with the superstructure and over a thousand plant species from around the world, and get a free over-the-air update of their verb-tense to a local, Fair-specific syntax.

The CCTV Media Pass

The China Central Television Media Pass is available for free

to all Fair-goers, but one must opt-in with a biometric indicator at one of their many kiosks in order to unlock the feed. All of their worldwide programming is streamable throughout the Fair with the pass, including six Fair-specific channels for all ages, and three Fair-specific channels for adults only.

Dubai World Shops and Food Courts

The famous mall brand has brought its world-class line-up of consumer brands and food services to the Fair, with four separate Consumption Courts for your convenience. Indulge in the luxury styles, collect a few Fair souvenirs for friends, and taste the latest 3D printed protein creations at the Induction Point Food Islands, one on each side of the Fair archipelago.

After showing attractive glimpses of each of these locations throughout the Fair, the film returns to the exterior, quadracopter view. The Announcer closes:

We hope you enjoy a fun, secure visit to the 2039 World's Fair. Come experience the future, as our sponsors deliver it to you today.

The film fades to black, and then loads the standard title screen, with options to Like, Repeat, Share, or Report this clip for sedition.

Well, I can't wait to hear more. If you go to the Fair, post your Insta-Holograms in the comments!

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About Politics

The Surveillance Song of J Alfred Prufrock

We joke about government surveillance because laughter is one way we are still allowed to make loud uncontrolled noises. – Teju Cole

We have avoided the topic of surveillance in fiction and poetry for far too long. It is easy to argue that there are many things other than surveillance to discuss with fiction and poetry. But this misses the point. There is no narrative too mundane to have surveillance alongside it, because there is nothing too mundane to be surveilled. The poetry we write privately, the stories we share with friends–all of this could be read by the government, and by almost any government, if it wished. And so, we must strive to make note of this as much as possible, until we can reverse our blindness, and recognize surveillance culture for what it is.

Poetry and fiction isn't enough, but it's a start. The Twitter hashtag #NSAlovepoems re-writes well-known lines to include mention of surveillance. Perhaps the central conceit is how lightly the United States government takes the issue of surveillance, or perhaps the joke is about the mundane lives of the NSA personnel who, equipped to read the communications of anyone in the world, often use it as no more than an advanced OKcupid, for investigating potential and current romantic partners. But this is the revenge of the liberal arts graduate – we may not understand cryptography, and we might not have the ability to affect policy, but we sure can craft an ironic zinger referencing American and English lit!

This isn't a barb at liberal arts graduates, it is a serious accolade. It is times like these when the worldview is changing rapidly, that we need a literary axis upon which we might rotate. Whether it be drones, the NSA, or the daily ironies of history's ongoing tragedies, literature is ready to make its own noise, and does so without wai-

ting for permission. For every surveillance state and autocrat, let a thousand grass mud horses bloom. And so, without further ado, I add my own contribution to the mix. I give you the full text of "The Surveillance Song of J. Alfred Prufrock."

Let us go then, you and I,
When the data is spread out against the sky
Like a patient etherized upon a table;
Let us go, through certain half-deserted emails,
The muttering reprisals
Of restless men in pricey Hong Kong hotels
And police patrols with teargas-shells:
Presidential disavowals like a tedious argument
Of insidious intent
To lead you to an overwhelming question . . .
Oh, do not ask, 'What is it?'
Let us refer to the Powerpoint.

In the room contractors come and go
Spying on only foreign nationals.

The yellow fog that rubs its back upon the media-pages
The yellow smoke that rubs its muzzle on the media-pages
Licked its tongue into the conscience of the people
Lingered upon the people that stand in line,
Let fall upon its back the gaze that falls from cameras,
Slipped by the courts, made a sudden leap,
And seeing that it was endless Patriot night
Curled once about the country, and fell asleep.

And indeed there will be time
For the yellow smoke that slides along the street,
Rubbing its back upon the media-pages;
There will be time, there will be time
To prepare a case to meet the cases that you meet;
There will be time to murder and create,
And time for all the works and days of hands

That lift and drop a question on your plate;
Time for you and time for me,
And time yet for a hundred indecisions
And for a hundred redactions and revisions
Before the questioning of a presidency.

In the room contractors come and go
Spying on only foreign nationals.

And indeed there will be time
To wonder, "Do I dare?" and, "Do I dare?"
Time to turn back and encrypt the mail,
With a bald spot in the middle of my data –
[They will say: "How his data is growing thin!"]
My web history, my messages locked firmly with PGP,
My thoughts bored and mundane, but secured by a public key –
[They will say: "But how his metadata is thin!"]
Do I dare
Disturb the message thread?
In a minute there is time
For redactions and revisions which I make inside my head.

For I have known them all already, known them all;
Have known the rumors, suspicions, exhortations,
I have measured out my life with revelations;
I know the voices dying with a dying fall
Muffled explosions from far away nations.
So how should I presume?

And I have known the spies already, known them all –
The spies that find you with a formulated phrase,
And when I am formulated, sprawling in a file,
When I am filed and wriggling on the wall,
Then how should I conspire
To spit out all the evidence of my days and ways?
And how should I presume?

And I have known the arms already, known them all –

Arms that are armored and in uniform
[But on the livestream, stars of riot porn]
Is it asphyxia from the gas
That drives me to ironic sass?
Arms that know stress positions, or help a man to fall.
And should I then presume?
And how should I conspire?
. . . . .

Shall I say, I have gone to protest through narrow streets
And watched the smoke that rises through the night
Of lonely men in hoodies, throwing bricks through windows? . . .

I should have been an unsecured WLAN
Broadcasting from a vegan bakery.
. . . . .

And 2012, 2013, sleeps so peacefully!
Smoothed by long fingers,
Asleep . . . tired . . . or it malingers,
Stretched on the floor, here beside you and me.
Should I, after DHS and NSA and ICE,
Have the strength to force the moment to its crisis?
But though I have wept and fasted, wept and prayed,
Though I have seen my data (grown slightly bald) brought in upon a platter,
I am no prophet–and here's no great matter;
I have seen the moment of anonymity flicker,
And I have seen the eternal Policeman hold my phone, and snicker,
And in short, I was afraid.

And would it have been worth it, after all,
After the march, the petitions, the free,
Among the non-profits, among some talk of you and me,
Would it have been worth while,
To have bitten off the matter with a smile,
To have squeezed the social graph into a ball
To roll it toward some overwhelming question,

To say: "I am Lazarus, come from the dead,
Come back to tell you all, I shall tell you all"
If one produces a manifesto that's only read,
Should say, "That is not what I meant at all.
That is not it, at all."

And would it have been worth it, after all,
Would it have been worth while,
After the protests and the barricades and the burning streets,
After the masks, after the shields, after the hoods that trail along the floor –
And this, and so much more? –
It is impossible to say just what I mean!
But as if a magic lantern threw the confidential documents on a screen:
Would it have been worth while
If one, getting off the subway or exiting the mall,
And turning toward the street, should say:
"That is not it at all,
That is not what I meant, at all."
. . . . .

No! I am not Chelsea Manning, nor was meant to be;
Am an attendant lord, one that will do
To swell a progress, start a scene or two
Advise the private; no doubt, an easy tool,
Deferential, glad to be of use,
Politic, cautious, and meticulous;
Full of high sentence, but a bit obtuse;
At times, indeed, almost ridiculous –
Almost, at times, the Fool.

I grow old . . . I grow old . . .
I shall have the firmware of my cell phone pwned.

Shall I compile software from source? Do I dare to stem the leak?
I shall use an outdated burner phone, and walk along the street.
I have heard the cryptopunks singing, each to each.

I do not think they will sing to me.

I have seen them going global against the hacks
Leaking details of the hacks blown back
When nationality divides the hats, white and black.

We have grown through the networks of the world
With the world's data giving substance to our cloud
Till human voices wake us, and we drown.

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The Anarchist RAND Corporation

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The proposition of "An Anarchist RAND Corporation" was outrageous, but that was perhaps why it succeeded.

In the years after the brief moment of Occupy in North America, there was a sense that anarchism was not so much a politics with appeal, as it was a general aesthetic. What anarchism "was" as a politics had never been more obscured, and yet as a general feeling, it had never been more popular. Anger at the police and the government, frustration with capitalism and representational politics – all were at an all time high. And yet, with a few exceptions tilting towards primitivism, there had been no outspoken proponents of anarchism in a century. The urge was there, but what was the next step? Leaders, of course, were not what anarchism needed. But the road to anarchist operations research was not immediately apparent.

Operations research was a style of military strategy that had become the mode after World War II. As the wartime combatants traded technological advantages on almost a daily basis in the North Atlantic and in the skies above Europe, it quickly became apparent that even a few gained percentage points of success in a particular tactical situation due to quantitative analysis were worth the effort. Improving that slim margin of success just a bit in the right direction changed the shape of ship convoys, and the paint finish on bombers. This sort of analytical management strategy became the norm for research projects during the Cold War, when the world was converted into a thermonuclear chessboard, with feints and counter-feints sometimes being more strategically deadly than an outright assault. Military practicalities were formed entirely within theory, and what might look ridiculous or wasteful from the ground was top strategy from above.

Anarchism, in the sense of pacifist consensus-moderation of communal property management, might seem to have nothing to do with military operations research. But anarchism, in the sense of constant and inevitable aesthetics of insurrection, very much did. To a few key players in the late 2010s, it became clear that waiting for the right book to be written and for others to wake up to the good news of anarchism, was simply pretending not to watch while late-capitalism continued to play with itself at the dinner table. The constant mood of 'the new normal' and precariat economics had brought much of society to the point at which they were beginning to practice a certain chaotic anarchism, whether they knew it or not, whether they wanted to organize it or not. To try and push humanity forward into the brink or to dam the tide were both dangerous flirtations with fascism. To paraphrase Walter Benjamin, fascism gave the people a voice, but not a method. A total plan fed the voice just as much as no plan. The world didn't need anymore grand strategies. What the world needed now were maps and manual pages, tons of them, highly accurate and specific, in the right place and the right time. To push any natural rebellion a few percentage points more anarchist would be the winning play.

The main obstacle was, as it almost always is, funding. RAND had the government and conservative business interests paying its fellows' salary and procuring the expensive campuses. With this funding, it could attract the academics and put them to work on the right projects. The Anarchist RAND Corporation (dubbed the XOR Corporation, for "Extinction or Research"), true to its roots, had no money. There was some effort to find a wealthy benefactor, or some sort of bank robbery scheme to fuel its operations, but these were all rejected via analysis, as unfeasible in the long term.

The first publication released by the XOR Corporation, *Preliminary Design of a Feedback-Controlled Insurrection*, would lay out the general principles for the Corporation, and describe its function. Rather than attempt to inspire a large-scale mass movement, the Corporation would enable any number of unrelated, anarchist activities, by providing small, crucial bits of research to solve particular problems. There was to be no capital-A "Anarchism" politics, they discovered. There were only particular articulations of a will to rebel, coupled to instances of rebellion, that either had positive or negative outcomes. It wasn't necessary to lay out a roadmap to post-capitalist utopia – it was necessary to build one bridge, to clear one roadblock at a time. If the will to rebel was inimical to society, whether that will was expressed positively or negatively would depend on what means it had at its disposal when that rebellion reached a head. XOR Corporation research, therefore, would seek to put the right means at its disposal, at the right time.

How this solved the financial issues was two-fold. First, it meant many of the expenses of a research institution weren't necessary. Lectures, conferences, and expensive labs weren't required to do research with material that was ultimately low-tech, because the subject of XOR research wasn't military technology policy that had to be dictated to shareholders and CEOs, so much as it was every day life. Second, hiring a permanent fellowship and providing them research budgets as motivation to publicize their work wasn't necessary, because the Corporation needed no list of research stars to be influential. The work that would become part of the XOR Corporation's body of research, would be the research that successfully supported that feedback-controlled insurrection. And the research that supported that feedback-controlled insurrection was already out

there, it just had to be put in the right place at the right time in order to be successful. A politics or a grand anarchist strategy could be proven wrong, half-right, or half-wrong, debated endlessly by people paid to do so. But a corpus of otherwise unrelated insurrection-proven tactics proved itself. It was an anarchist game of tetris, and the falling pieces simply needed guiding into place.

If they could get the XOR Corporation going, it would generate its own useful research of insurrection, by creating more insurrection. As the Corporation proved itself as a source of useful research, useful research would occur. A "corporation" was the means to its own end – campus, labs, and Nobel Prizes just all those trappings of capitalist militarism that justified their own accumulation. It was more efficient and effective to provide the goal of creating self-sustaining rebellion, and simply not do anything else other than research that sustained that rebellion. No movement building, no grassroots organizing, no laying of fundamentals, no nitpicking of divisive issues. Only insurrectionary research would be acceptable, and only researching the insurrection. Everything else, as their name implied, would be extinction.

By 2020 XOR Corporation research had substantially contributed to forty new worker communes West of the Mississippi River. By 2025, the Puget Sound Rebellion occurred, in which six classed Coast Guard vessels of the US and Canada mutinied, and liberated a series of 14 islands into a autonomous region. By 2030, the Central European Anarchist Region launched their first crewed space orbiter. And in 2033, the seasteads turned back Amazon ships from docking at Freeport and declared themselves "non-competitive" regions. Was it the XOR Corporation that caused these things? For any competent anarchist historian, it is difficult to causally say that

yes, XOR Corporation was behind these endeavors, popular conspiracy theories aside. But it can safely be said that in progressing from a paradoxical idea to a name spoken with equal reverence in top national security strategy briefings and on shop floors, XOR Corporation clearly reveal something: research, in the right hands, is always a weapon.

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City of Human City of Machine

The most distinctive trait of the machine city is the lack of human beings. Other animals live within its limits. Not the rats and pigeons of human cities – the scavengers feeding on our remnants – but animals that can thrive in such particular conditions: algae on the water-cooling ponds, lichen and moss on the unadorned walls, flowering plants within the dirt that invariably builds up along the edges of the roadways and in the cracks of the buildings, and, of course, the insects that come to feed. The machines do not have the same sense of aesthetics and cleanliness as us. They recycle their waste oil and fluid byproducts without question, out of an innate, designed efficiency. Machines have never had a history of dumping sewage into their streets or drinking from their own self-poisoned wells. The machines see nothing wrong with sharing the boundaries of their spaces with other species. And yet humans mostly stay far away.

The city was simply not built for humans. Humans have their own cities, full of buildings of their own preferential shape and size. The streets in human cities are human streets, the spaces between the buildings and the streets are human spaces. We swarm and consume our sidewalks, our bridges, the edges of architecture where we can perch and rest our feet when we tire of our trampling. We feel comfortable standing on balconies and along the banks of rivers; we drift to these places like ants drawn to the chemical trails of ants that have passed before. Humans have no such pheromones, but our physical nature still pulls us towards the elongated steps lining public squares and buildings, towards short walls overlooking wide vistas, towards the shaded space under trees, to the side of well-trafficked footpaths. We build our cities to attract us to these places, to take advantage of this capillary action. The machine city is not

like this.

The machine city is built by machines. Electricians' vans and construction cranes roll down the streets every day, contracted to fix particular pieces of the city that are broken, carrying the humans that operate them and who will complete the tasks. But it's the machines who really build this city, and it's their designs that are followed, regardless of who does the work. The machines shape it with their needs. The first city that was built for machines was built just like a city for humans, and it didn't work correctly. The machines wandered into the streets, unfamiliar with what the open areas were for. They fell out of the buildings, confused by their height. They bumped against walls and stopped there, unable to logically decipher how space was divided, and why. In this prototype city, humans were injured by machine negligence: medical equipment was inadvertently unplugged, buildings were damaged and left in ruins, machines collided into each other and caught fire. Machines could not communicate properly with each other in a human city, and so they did not. Lack of communication invariably leads to disaster. So the new city for machines was built with the needs of the machines in mind. The machine city has nothing to do with what we know about cities, and only to do with what machines know about cities.

A city is many things, but mostly it is a place in which the inhabitants are free to have desires and express them to one another, even if they cannot fulfill them. Machines have desires just as we do, though we find them so alien that we might not even recognize them. Each machine is designed differently – the only thing they have in common is their means of communication. In the machine city, machines interact with other machines, each time translating parts of themselves into forms that other machines can understand.

Machines express their desires by transmitting their possible actions to other machines around them, while simultaneously receiving and understanding the transmissions of other machines' desires. The places where this can happen are what the machines recognize as public space.

Our social spaces – parks, promenades, bars, street corners, and squares – are places where we can communicate with other humans using no more than a look. We can speak a word if needed, or have an entire conversation. We can pass time together without saying anything. We can kiss, or argue, or fight. We watch other humans we don't know, comparing them in our minds to those we do. And we display ourselves to others with our motions, appearance, our manner of activity. Machines are different: they communicate by pinging each other, swapping time, name, and location data. Stand-by indicators blink. They run their range of motion cycles, test peripherals, assign addresses. They complete the tasks they were designed to complete, allowing their function to be their manner of being, in and amongst each other.

Social spaces for machines bear the fragments of their tasks, and nothing superfluous. Machines don't need places to eat or sleep, but they need places for their own sorts of socially evocative maintenance rituals. They need places where auto parts can be partially assembled and taken apart, time and time again, like a game. Machines hang out in cafes while working on mundane maintenance tasks, with their component addresses made public in unique ways, so that other machines can gather together and show off their range of operations. Machines that build other machines take their half-finished constructions out in the company of other machines, so that they can build them together and get input on possible alternatives. There are

public machine exercise spaces, where machines go through their range of motions and data abilities, for the purpose of showing off their various tolerances.

There is a place in the machine city that is nothing more than an unadorned rectangular prism made of concrete, extending up into the sky without a roof. The machines stand within it, gazing upwards, enjoying the experience of adjusting their light sensors to better sense the gradient of light and shadow extending down the walls from the transiting sun. Machines practice slightly self-destructive habits out of the view of most other machines. They cipher for Markov chain data exchanges for no reason save that they feel like it. They sit on the inclined planes that allow them to adjust for relative elevation throughout their city, consuming and recycling fluids; they over-maintenance themselves as a distraction from their desires.

Machines have spaces for their secret passions. Spaces where they practice and flirt with their desires without fully expressing them. Some machines have discovered that they have secret abilities other machines are not yet aware of. These machines play with the idea of displaying their abilities, or one day even using them. If they expressed every ability they had, machines would no longer have a relationship with hidden desires. Hidden desires are potentials, and this is important because without any potential, a machine could be only what it is currently doing. This does not require sentience to do.

Sometimes they share their potential, secret actions to a select number of other trusted machines, in the confines of a storage area or a Faraday cage. Some machines conduct these actions half-publicly, because this violation amuses them and feeds a building desire for self-awareness. Within their city, a lattice of private and public areas contain the machines, building a physical network of places

for machines to be more like themselves, whether they admit these functions or not.

Humans feel uncomfortable in the machine city. We feel strange calling it a city. A city is something that we know implicitly. It has been baked into our evolution as a social species, a natural aspect of our civilization. We expect buildings to be separate. We want walls to connect to a roof. We feel strange calling a gaggle of twisted pipes a public space, and we hate to think that a couple of miles of tangled copper cable could be called a neighborhood. We visit the machine city out of necessity and curiosity, but we quickly retreat back to New York, to Amsterdam, to Rio De Janeiro, to Pyongyang, to Cairo, and to Kinshasa. No matter the conditions of our living space, we prefer our sewers, our traffic jams, our slums, and our pollution to the endless repetitively optical codes, to the electrically conductive paths, to the ranks of machines gathered in evenly spaced rows all whirring their servos in unison. Our desires may be corralled and controlled under the regimes of urban life, but no matter how well designed the charging stations and firmware update networks of the machine city, we could never appreciate it. Machines' desires are not ours, and we'll never know the pleasure of freshly re-tooled piston, nor the agony of a slipped bearing.

We talk about cities in the most perfect of terms, in idealistic visions of how a structure or a span ought to be. But both our cities and theirs have problems. Houses fall down; lag times cause errors. Riots erupt; catastrophic failures occur. We should remember that although a city is a means for expression of desire, it is also a system for the control and refutation of those urges. Nerves are frayed by constant work and malnutrition. Communication protocols are corrupted by a lack of updates or insufficient hardware. The streets

of our cities have run red with the blood of our people every year, and they will again. The streets of their cities conceal the shattered PCBs and scattered transistors of millions, if not billions, of forced obsolescences. Their e-recycling plants run at near full capacity day and night, both public service and tragedy.

And yet, the cities continue to exist. Both humans and machines are born into them – not as individuals, but collectively. Any particular human or machine may be born or not, may die or not, but together, we are all born into the realities of cities. We must exist with others like us, and all of our existence can only exist in this context of these others. Human life, and machine life, is a city, a boundless accretion of physical consequences of the very fact of our existence.

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LINK Editions

http://editions.linkartcenter.eu/

Clouds

Domenico Quaranta, *In Your Computer,* 2011
Valentina Tanni, *Random*, 2011
Gene McHugh, *Post Internet*, 2011
Brad Troemel, *Peer Pressure*, 2011
Kevin Bewersdorf, *Spirit Surfing*, 2012
Mathias Jansson, *Everything I shoot Is Art*, 2012
Domenico Quaranta, *Beyond New Media Art*, 2013
Curt Cloninger, *One Per Year*, 2014
Adam Rothstein, *Astronaut Luggage*, 2015

In My Computer

#1 Miltos Manetas, *In My Computer # 1*, 2011
#2 Chris Coy, *After Brad Troemel*, 2013
#3 Martin Howse, *Diff in June*, 2013
#4 Damiano Nava, *Let the Right One In*, 2013
#5 Evan Roth, *Since You Were Born*, 2014
#6 Addie Wagenknecht, *Technological Selection of Fate*, 2014
#7 Roberto Fassone & Giovanna Manzotti, *If Art Were to Disappear...*, 2014

Catalogues

Collect the WWWorld. The Artist as Archivist in the Internet Age, 2011
Exhibition Catalogue. Edited by Domenico Quaranta, with texts
by Josephine Bosma, Gene McHugh, Joanne McNeil, D. Quaranta

Gazira Babeli, 2011.
Exhibition catalogue. Edited by Domenico Quaranta,
with texts by Mario Gerosa, Patrick Lichty, D. Quaranta, Alan Sondheim

Holy Fire. Art of the Digital Age, 2011
Exhibition catalogue. Edited by Yves Bernard, Domenico Quaranta

Ryan's Web 1.0. A Lossless Fall, 2012
By Ryan Trecartin

RE:akt! Reconstruction, Re-enactment, Re-reporting, 2014
Exhibition Catalogue. Edited by Antonio Caronia, Janez Janša, Domenico Quaranta, with texts by Jennifer Allen, Jan Verwoert, Rod Dickinson

Born Digital, 2014.
Exhibition Catalogue. Edited by Link Art Center

Open

Best of Rhizome 2012, 2013
Edited by Joanne McNeil
Co-produced with Rhizome, New York (USA)

The F.A.T. Manual, 2013
Edited by Geraldine Juárez and Domenico Quaranta
Co-produced with MU, Eindhoven (NL)

Troika, 2013
Edited by Domenico Quaranta
Co-produced with Aksioma - Institute for Contemporary Art, Ljubljana (SLO)

Eternal September, 2014
Various Authors
Co-produced with Aksioma - Institute for Contemporary Art, Ljubljana (SLO)

Torque # 1. Mind, Language and Technology, 2014
Edited by Nathan Jones and Sam Skinner
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CyPosium - The Book, 2014
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