



Michael Moorcock * Abney Park * Darcy James Argue * Thomas Truax * G. D. Falksen * J. T. Hand * Margaret P. Killjoy * Cory Gross

Contrary to the honeyed words of gentlemen, this Age of Empire is a pestilence upon every continent and soul, through colonization manifest or implied.

Rich men from stone buildings wade blindly through the penniless on their way to the opera, at leisure after a day spent plotting wars across the seas; and though these gentlemen are excellent at imposing a world order, they are equally adept at colonizing the women who maintain their homes.

All the while their attention is turned outwards, and all the while we plot from within. Discontent with the complex machinations of the imperialist state, we build a system of co-operation and autonomy. Fed up with the hunger about us, we glean and tax the rich. Tired of playing master or servant, we work only as friends and lovers.

And when approached by the newspapers, how they look at us queerly when we tell them with open hearts, "Death to the Empire! No longer will we cower; we are all nobility! Your colonization of our bodies and hearts is an act of war!"

> — Erica A. Smith, On The Political Situation Experienced In Our Era

ISSUE ONE :

PUTTING THE PUNK BACK INTO STEAMPUNK

It is with great pleasantries and with much joy that I welcome you, dear reader, to the first issue of SteamPunk Magazine. You hold in your hands (or stare at on a screen, if you're cheating) the product of a near-ridiculous amount of volunteer work by a variety of people. Our budget was literally nothing.

One of the goals of this magazine is to bring the SteamPunk culture offline, a step we consider crucial to its vitalization. We want SteamPunk to be more than a blog, more than a website. Hell, we want SteamPunk to be more than a magazine; we imagine it as a way of life. And while we respect that the internet—as a tool—can be useful, we also see that it—like many tools—has become a monster of its own.

The magazine is a dying medium, and only the massive consumer magazines, driven by glossy advertisements, are surviving without heavy attrition. And—not to hold magazines on too high of a pedestal, mind you—along with the death of physical media comes a lack of physical culture. No longer are we introduced to new concepts face-to-face, no longer do we debate in person.

But it is the physical nature of SteamPunk that attracted us to it in the first place, however we first heard of it. We love machines that we can see, feel, and fear. We are amazed by artifacts but are unimpressed by "high technology." For the most part, we look at the modern world about us, bored to tears, and say, "no, thank you. I'd rather have trees, birds, and monstrous mechanical contraptions than an endless sprawl that is devoid of diversity."

Included in this magazine are a few pieces of radical political thought. Most prominent among these is "The Courage to Kill a King", an essay which explores the period in time when anarchists were quite prone to political assassination. We feel it is important to disclaim, then, that this piece does not necessarily represent the views of any other contributors or the editorial staff of the magazine.

It is the "punk" side of SteamPunk that is controversial, of course, and it is to the punk side of SteamPunk that the editorial staff owes its loyalty. But we hope to provide a range of material that will appeal to a reasonably wide audience. A bit of a contradiction, perhaps, but we believe it's one that we've balanced herein. We are always open to correspondence, and plan to include a letters section in the second issue. Further, we are a contributorrun magazine: we get all of our material from submissions.

I hope you enjoy the magazine. If you don't, contribute something you would rather have seen!

— Margaret P. Ratt

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WHAT THEN, IS STEAMPUNK?

Colonizing the Past so we can Dream the Future by the Catastrophone Orchestra and Arts Collective (NYC)

STEAMPUNK IS A RE-ENVISIONING OF THE past with the hypertechnological perceptions of the present. Unfortunately, most so-called "steampunk" is simply dressedup, recreationary nostalgia: the stifling tea-rooms of Victorian imperialists and faded maps of colonial hubris. This kind of sepiatoned yesteryear is more appropriate for Disney and suburban grandparents than it is for a vibrant and viable philosophy or culture.

First and foremost, steampunk is a non-luddite critique of technology. It rejects the ultra-hip dystopia of the cyberpunks black rain and nihilistic posturing—while simultaneously forfeiting the "noble savage" fantasy of the pre-technological era. It revels in the concrete reality of technology instead of the overanalytical abstractness of cybernetics. Steam technology is the difference between the nerd and the mad scientist; steampunk machines are real, breathing, coughing, struggling and rumbling parts of the world. They are not the airy intellectual fairies of algorithmic mathematics but the hulking manifestations of muscle and mind, the progeny of sweat, blood, tears and delusions. The technology of steampunk is natural; it moves, lives, ages and even dies.

Steampunk, that mad scientist, refuses to be fenced in by the ever-growing cages of specialization. Leonardo DaVinci is the steampunker touchstone; a blurring of lines between engineering and art, rendering fashion and function mutually dependent. Authentic steampunk seeks to take the levers of technology from those technocrats who drain it of both its artistic and real qualities, who turn the living monsters of technology into the simpering servants of meaningless commodity.



WE STAND WITH THE TRAITORS OF THE PAST AS WE HATCH IMPOSSIBLE TREASONS AGAINST OUR PRESENT.



AUTHENTIC STEAMPUNK IS NOT AN ARTISTIC MOVEMENT but an aesthetic technological movement. The machine must be liberated from efficiency and designed by desire and dreams. The sleekness of optimal engineering is to be replaced with the necessary ornamentation of true function. Imperfection, chaos, chance and obsolescence are not to be seen as faults, but as ways of allowing spontaneous liberation from the predictability of perfection.

Steampunk overthrows the factory of consciousness by means of beautiful entropy, creating a seamless paradox between the practical and the fanciful. This living dream of technology is neither slave nor master, but partner in the exploration of otherwise unknowable territories of both art and science.

STEAMPUNK REJECTS THE MYOPIC, NOSTALGIA-DRENCHED politics so common among "alternative" cultures. Ours is not the culture of Neo-Victorianism and stupefying etiquette, not remotely an escape to gentleman's clubs and classist rhetoric. It is the green fairy of delusion and passion unleashed from her bottle, stretched across the glimmering gears of rage.

We seek inspiration in the smog-choked alleys of Victoria's duskless Empire. We find solidarity and inspiration in the mad bombers with ink stained cuffs, in whip-wielding women that yield to none, in coughing chimney sweeps who have escaped the rooftops and joined the circus, and in mutineers who have gone native and have handed the tools of the masters to those most ready to use them.

We are inflamed by the dockworkers of the Doglands as they set Prince Albert's Hall ablaze and impassioned by the dark rituals of the Ordo Templi Orientis. We stand with the traitors of the past as we hatch impossible treasons against our present.

Too MUCH OF WHAT PASSES AS STEAMPUNK DENIES THE PUNK, in all of its guises. Punk—the fuse used for lighting cannons. Punk—the downtrodden and dirty. Punk—the aggressive, doit-yourself ethic. We stand on the shaky shoulders of opiumaddicts, aesthete dandies, inventors of perpetual motion machines, mutineers, hucksters, gamblers, explorers, madmen and bluestockings. We laugh at experts and consult motheaten tomes of forgotten possibilities. We sneer at utopias while awaiting the new ruins to reveal themselves. We are a community of mechanical magicians enchanted by the real world and beholden to the mystery of possibility. We do not have the luxury of niceties or the possession of politeness; we are rebuilding yesterday to ensure our tomorrow. Our corsets are stitched with safety pins and our top hats hide vicious mohawks. We are fashion's jackals running wild in the tailor shop.

IT LIVES! STEAMPUNK LIVES IN THE REINCARNATED collective past of shadows and ignored alleys. It is a historical wunderkabinet, which promises, like Dr. Caligari's, to wake the somnambulist of the present to the dream-reality of the future. We are archeologists of the present, reanimating a hallucinatory history.





IN 1869, A SCIENTIST AND MUSICIAN BY THE NAME OF GEORGE Frederic Kastner stuck flames into glass tubes to see what would happen. Lo and behold, sound emerged from the other end. In the version that he perfected, the tone emerged when two flaming gas jets separated, and disappeared when they were brought back together. We have no idea how that worked¹, but he hooked the gas jets up to a keyboard and called it a "pyrophone", or "flame organ".

But there is a simpler method of thermoacoustic music to be had, and we even dare call it a pyrophone. A single flame, when placed within a tube, causes a temperature difference. The temperature difference causes the air to oscillate, which we perceive as sound.

And what a sound! The attack is slow and the note builds over a second or two, with pronounced harmonics on the octave of the root. We can have a beautiful pad synth sound without such antiquated ideas as "electricity", and a pyrophone's size is limited only by imagination and source of heat.

The simplest way to hear a pyrophone is to acquire yourself a metal pipe of a 3-5cm diameter and a propane torch (check the plumbing section of a store). Light the torch and stick the nozzle a ways into the tube. Very quickly a sound will emerge. Very quickly, as well, security will emerge—if you're still in the store.

But for a polytonal pyrophone there are two problems to be surmounted: the method of applying fire to the pipes, and the tuning of the pipes.

The simplest method of fire application is the use of handheld propane torches. Limited by your two hands, you will have to make friends with someone to form three or four note chords, but all kinds of mechanical (or, yes, electrical) systems can be devised to control the jets of flame. A mechanical system could route input from a keyboard to valves and sparkers set under the pipes.

One musician noted that candles were not hot enough, and that the flame from bunsen burners was pulled away from their source of gas by the convection taking place in the tube. The recommended solution was a Fisher burner, a common lab instrument that has a grill across the top that acts as a mantle.

Tuning the pipes will also be difficult. For someone more interested in experimentation than western music, there is an easy solution to tuning: don't. Just get pipes of different lengths. Longer pipe = lower pitch, shorter pipe = higher pitch.

But if you want to harmonize with the rest of the world, you will have to tune your pipes. A pipe resonates at a certain frequency, depending on whether it is open at both ends or only one. We assume that we can consider our flame organ to be composed of open-ended pipes.

The resonant frequency of a pipe is a function of the length and diameter of the pipe and of the speed of sound. Unfortunately for us pyros, the speed of sound changes as the temperature does.

We ran a few experiments to determine the pitch of different pipes at different lengths. It appears that the speed of sound is differing in our pipes, but not too greatly (approx. 407-413 m/s). This chart provides *rough* guidelines—fire is a chaotic force, and we have not done as much experimentation as we would like. **Do** not expect this to work! Overestimate the length *a lot* and then tune it by shortening the pipe. 🏶

L = length in meters L' = effective length in meters d = diameter in meters t = degrees in celsius f = frequency in hertz v = velocity in meters per second	NOTE	f^2	Ľ3
	С	130.8	1.567
	C#	138.6	1.479
	D	146.8	1.396
	D#	155.6	1.317
Speed of Sound (v) v = 331.6 + .6t	E	164.8	1.243
	F	174.6	1.174
Effective Length (L') L' = L + .3d Length (L) L = $\left(\frac{v/f}{2}\right)$ 3d	$F^{\#}$	185.0	1.108
	G	196.0	1.045
	G [#]	207.7	0.987
	А	220.0	0.932
	A [#]	233.1	0.879
	В	246.9	0.830
	С	261.8	0.783

2 - To determine the frequency of a note in the next lower octave, divide the note in half. To raise it by an octave, multiply it by two.

3 - Effective Length was calculated by using v=410, the average of our experiments.

^{1 -} If you can figure it out, let us know!



" If Chimes could whisper, if Melodies could pass away, and their souls wander the Earth… if Ghosts danced at Ghost Ridottoes, 'twould require such Musick, Sentiment ever held back, ever at the edge of breaking forth, in Fragments, as Glass breaks."

- Thomas Pynchon



Choir of Serahpic Deviltry

ALTHOUGH NOT THE FIRST CRYSTALLOPHONE, BENJAMIN Franklin has been credited for the invention of this beautiful instrument in 1761. It was possibly the first instrument invented by an American, and it predates the similarly named, but musically disparate, free-reed Harmonica by about sixty years. Franklin's instrument was an improvement upon the Seraphim, a system of wineglasses that are tuned by being filled with water.



You may know already that if one runs a wetted finger along the edge of a wineglass, you can produce a single, clear note.

The most startling thing about the glass harmonica is—ironic to its name—the lack of harmonics produced. Although some players have learned to bring out harmonic notes, glass in general gives a remarkably pure tone.

Franklin arranged 37 bowls horizontally on a spindle, separated by cork. A simple foot pedal powered the flywheel that spun them all, and multiple bowls could be sounded at once, allowing a musician to create chords with the voice of the angels.

AND YET, ALTHOUGH THE INSTRUMENT gained widespread acceptance as a parlor instrument—and was written into orchestral pieces by Mozart, among others—it went out of vogue by 1810. You see, the Armonica was more than a musical instrument. Dr. Franz Mesmer, from whom we have the word mesmerize, used the singing bowls in his medical treatments.

Everything went downhill for the Armonica when people got the bright idea that it was supernatural, and therefore evil. Insanity, convulsions, marital disputes, death and even the waking of the dead were blamed on its seraphic voice. Its popularity never returned.

BUILDING ONE WILL PROBABLY BE DIFFICULT. THE construction of the apparatus to spin the bowls would not be overly complex, but glass-blowing the bowls to specific notes would be.

Yet hope is not lost; many of the original glass harmonicas were tuned by grinding bowls down. The shallower the bowl, the higher the pitch. It seems not inconceivable to take a variety of second-hand glass bowls and tune them in this manner. Unfortunately, the physics of how to best pre-determine pitch of a bowl are quite beyond the scope of this article or author, so we suggest simply playing a bowl into a tuner and working from there.

The original Armonicas were made from a lead-based glass, but modern Armonicas are usually built with quartz glass. Some collectors insist that this changes the tone, but we of DIY spirit will work with what is available.

Benjamin Franklin refused to patent the instrument, and he made a powerful statement against the tyrannies of ironfisted intellectual property we face today: "As we enjoy great Advantages from the Inventions of others we should be glad of an Opportunity to serve others by any Invention of ours, and this we should do freely and generously."



MOTHER OF THE DISPOSSESSED A Winter's Seasonal Tale Designed to Educate and Illustrate Illustrated by Nick Kole

December 26th, 188?, New York City in Winter

Boxing day was a day of family, and of celebration and gift-giving—for the rich, that is. For the denizens of New York City's many slums, this was just another frozen day. The only gifts they would receive would be those that they took for themselves.

Professor Calamity was in his fiftieth hour without sleep, but his half-mad companion Mathilda knew what made him shake; it wasn't sleepless nights. She had seen him work for more than four days at Bellevue without sleep, burning with the steady glow of laudanum during those tumultuous days of the draft riots. Now he could barely steady his hand to remove the charred flesh of the terrified Polish girls who lay on the dirty floor of their flophouse clinic.

Neal—their bulky ex-steelworker assistant—passed out numbers to the semi-conscious girls waiting as if they were queuing for a bakery. He tried to give the lowest numbers to the most severe cases, but to his untrained laborer's eye, each looked equally as bad as the next.

As the sweating hulk passed out tickets, Pip, a second assistant, checked the unconscious seamstresses for change to purchase the Professor his opium. Though he appreciated the ideals of a free clinic, Pip knew that Calamity would need some chemical steam to get him through the long night's work.

The filthy tenement clinic was often filled with screams, stench and roiling chaos. Fires were always the worst, and they were becoming more and more common on the Lower East Side; greater demand for textiles during the war years had created a glut of sweatshops in and around lower New York. Now, with the horrors of war drifting into the quiet despair of the depression, the sweatshops were a powder keg that was touched off with an infernal regularity; owners, desperate to squeeze as much profit as possible into twenty-four hours, were forcing more and more machines into their crowded and poorly ventilated sweatshops. Ever suspicious of the dishonesty and slothful machinations of their immigrant employees, the owners had taken to locking doors during shop hours to ensure that the girls stayed at their machines and did not steal a single rag. There were no smoking breaks, and so the girls—most in their early teens—were trapped within the walls of their workplace prison, smoking in their seats. Surrounded by swirling clouds of flammable textile dust, sweatshops became suffocating infernos all too often.

And after the volunteer firemen looted what they could while the building still blazed, the newspapers would screech that the seamstresses were to blame for their own deaths, that it was unfair that the city had to spend a buck fortyfive to bury each dead child in Potter's Field. In their cigar rooms around Washington Square, the owners would wait anxiously for their insurance checks.

Those lucky enough to survive could not afford private doctors and were forced to seek the free services of Professor Calamity—a nefarious alienist and drug addict—and his band of revolutionaries.

Three street arabs* had slipped through the chaos of the overcrowded clinic unnoticed—it was a skill they had perfected in the suffocating alleys of Hell's Kitchen. They pulled back the ripped Chinese curtain that separated the 'clinic' from Professor Calamity's cot.

Mathilda hissed at the intruding children, a slow yet sharp sound that froze their blood. She still wore the elegant mourning clothes that hinted at a past far removed from the teeming tenements of the Bowery, but her disheveled hair and frenzied eyes belied the effects of her burning insanity. She swiped at the children with long chipped nails.

"Mathilda my angel," Calamity mumbled, ignoring the intrusion and rubbing his inflamed eyes, "I need my medicine."

Mathilda's mood instantly transformed from fiercely defensive to exquisitely tender as she turned to him and rolled up his blood-soaked sleeve. She found her mark with the needle and sunk the rewards of Pip's hard work into her lover's thinning vein.

"You are Runts," the doctor said dreamily, glancing toward the children and stroking Mathilda's bare thigh, "and mighty far from Hell's Kitchen, I might add."

One of the two boys pushed the girl, the tallest and the oldest of the three, to the front. She came only to the lanky man's waist, but she stared into the doctor's red eyes and steadied her nerve.

"It's mama. She's hurt bad," she said, her voice so soft that it was nearly capsized by the screams coming from behind the curtain, "She needs a doctor. We have money."

"Can't you see he is sick?!" Mathilda was shouting, and the doctor winced. "You think you little cretins can just barge in here?!"

"Mathilda," Professor Calamity intervened, "it's quite alright. Let the Runts speak."

The girl gathered her courage once more and nudged one of the boys. "We have money," she repeated.

The boy wore an over-sized derby that fell forward over his face as he unearthed a few dingy coins from deep inside one of his many padfoot pockets. He presented them to Mathilda as though they were gold.

"Girls are dying in there, and you are wasting our time with these...." Mathilda pushed Calamity's wandering hand back down her leg, away from her waist, and straightened her black funeral dress.

"Children, I'm quite sorry to inform you that my *angel nocturne* is quite correct. There was a dreadful inferno at the Wedemeyer Corsettery

^{* [}note that "street arab" is not a racial term, but was used rather in american slang to mirror the more enduring british slang "street urchin". –ed.]

and we are quite unable to provide you aid. But if you could entreat your good and loving mother to come from the west side to see me, say in a few days time, I can't see any possible reason not to survey her. I shall have her right as rain, I promise you, my considerate gents and lady. Take your coins and make haste to the Chemist. Get some Dr. Parker's Drops; they will no doubt ease the suffering of your dear mother until such a time as she may make my acquaintance. I look forward...." Calamity's monologue was cut short as he nodded out, covering his eyes with his arm.

Mathilda stepped past the children and into the main room. "There will be a break," she announced to the writhing seamstresses. "The doctor is consulting his books, and will see no one for at least another hour."

She walked over to Neal and began to consult with him about the waiting patients, while the three children disappeared as quietly as they had entered. They stepped over girls dying from burns so grotesque that Goya would have shuddered, but their minds were filled only with worry for their mother. They had seen worse despite their tender age.

The children ran to the corner of the block, where Tinder was waiting for them. Tinder was the oldest of the Runts; no one knew how old he was, least of all himself, but a few whiskers were beginning to shadow his upper lip. These downy hairs were his greatest pride.

Tinder listened to the girl describe their encounter with the professor, running his sootstained hand through his mohawk while she explained breathlessly. "We will bring mama to the doctor," he said and then pointed at a scrawny boy, barely out of diapers, who accompanied him. The child pulled a crumpled cigarette out of his rag hat and passed it to Tinder.

"He won't see her," the girl cried, stamping her foot on the cobblestone street.

"We will make him. We just got to get mama to him." With this Tinder ended the discussion and turned, leading the smaller children down the shadow-soaked alley and back to their nest.

THE RUNTS WERE NOT A GANG, PER SE. THE Dead Rabbits, the Plug Uglies, the Mods, and the Bowery Boys were gangs. The Runts were not as organized as the Newsies, nor under the sway of an adult like the Five-Point chimney sweep gangs. Nor were they an ethnic fellowship like so much of New York. They were of no interest to political groups like Tammany Hall, the nativist Know-Nothings, or even the anarchistic steampunks. They were more akin to a family, albeit one quite large and poor-poor even by the standards of Hell's Kitchen. The Runts had been around for twenty years at least, and many famous street characters had been Runts in their earlier years, including the pugilist Copper O'Conner and the war hero Antonio Garlic.

The Runts inhabited—"lived" would be too gratuitous of an exaggeration—a series of conjoined basements that had once stored hay for the 35th Street stables. A fire had claimed the stables and all sixty-five working drays.

The Gotham Hack Association had raised enough money to have the stables rebuilt, but predictable corruption had siphoned the funds into the marble rooms of Tammany Hall. What was left was a burnt-out shell and a basement full of orphans who cried, grew, and stole under the benevolent violet eyes of Mama Giuseppe.

When Tinder returned to the children waiting in the cool basement, they had barely touched the potatoes they had lifted from Fulton Street market three hours earlier. They were all too anxious to eat; even Piggy Hovek hadn't swallowed a spud.

"She is too heavy to move. We cannot get her to the doctor," Tinder told the children, matter-offactly.

Some of the smaller among them began to weep.

"Is she going to die?" Piggy asked, choking on the words.

"No. There is someone who can help, but I need to talk to Spinner and Sal first." Tinder pointed to the older boys who stood in the back of chaotic common room.

Tinder and the two older boys entered the room where Mama lay, the room where Tinder planned to reveal the secret he had kept for years, the secret that he had half-forgotten in his love for Mama. It was a secret he had not asked to know, but Wild Kip had to tell *someone* before the ex-Runt had headed out west. Tinder lifted Mama's petticoat as she lay sleeping on her mattress and revealed the truth to Spinner and Sal. He needed their help to locate this "Harlowe."

CHESTER HARLOWE RECUPERATED ALONE IN his formal study. He found more enjoyment in the holidays now that he had grandchildren, but he was still relieved when the festivities were over and he could return to the gentle habits of retirement. His post-celebratory thoughts drifted to his youngest son's new fiancée as he sipped his club soda by the dying fire, to how shapely she had looked in her yellow velveteen dress earlier in the evening.

The sound of breaking glass woke him out of his reverie and he felt the cold Hudson wind invade his gloomy study.

"What in blazes are you doing?" Harlowe demanded of the three boys who were rushing in through the shattered garden door.

"Aye, are you Harlowe?" Sal asked as he freed his shirttail from one of the jagged pieces of glass.

Harlowe could tell by the Sal's many piercings that the kid was not from Gramercy. "This is my home and you are...."

Tinder wasted no time in sapping the elderly man, who fell to his knees still holding his glass. Even in excruciating pain, he was careful not to spill his drink on the antique Ankara rug.

Spinner hit Harlowe with the chair leg that he always carried and the old man went down. The last thing Harlowe heard as he drifted to the soft carpet of his study was one of the ruffians saying to another of them that their only hope had just been killed.

THE SHARP, THROBBING PAIN FORCED CHESTER Harlowe back into consciousness. He was only a mile or so from his study, but it was a world away.

His eyes could barely see in the sooty gloom of the Runts' cavernous cellar-home. He could hear their voices whisper in the darkness. They sounded to him like his own grandchildren talking late after midnight mass, speculating in hushed voices about the presents that would await them under the tree. He couldn't see them, but still he could not shake the feeling that his sweet, tender grandchildren were somehow down in this dungeon with him.

Tinder was the first to realize that the old businessman was awake. He poured some cool water into a dented can and handed it to Harlowe.

"I'm sorry we had to sap you mister. You see, our ma's real sick, and you can help." Tinder spoke in a voice more a boy's than a man's. "Don't you worry, we won't hit you again."

Harlowe could only just make out Tinder's face by the greenish glow of a soap candle; the child's pierced visage glowed a soft white in the faint illumination. He had seen these children before, perhaps not the Runts specifically, but their kind. He had seen their skinny tattooed arms reaching into his fireplace as they cleaned his three chimneys. He had seen their dyed hair glowing in the summer's daylight as they chased rats, with sticks, by the reservoir. He had been around these children almost every day of his life in the city, but had taken no notice. Like most of his fellow well-heeled colleagues, he had witnessed these street arabs but had never really noticed them. But looking upon them in the dank dungeon that was their home, he saw not only pests but also his own grandchildren.

He was not afraid of these children. He knew they would not hurt him again.

"Will you look at our mama, mister? Will ya?" Spinner pleaded.

Chester nodded that he would, but he was nauseated by the smell of Spinner's newly dyed blue hair when the boy moved closer to him. As he bent over, trying to keep himself from gagging, he wondered why these children mortified their flesh with needles, colored lye, and tattoos. Tinder helped him to his feet.

"Watch the timbers, they're low in here," Tinder warned, taking the businessman's hand.

"Tell me, why do you do it?" Chester asked as the pair descended further into the cellar. "The silver ring in your eyebrow ... and those tattoos on your arms."

"They can't nick it from you," Tinder answered absent-mindedly, "they'll take everything else, that's for sure."

Chester walked past dozens of children lying on filched pallets, huddled under patchwork blankets. They feigned sleep, every one, but peeked through half-open eyes at the welldressed stranger in their midst.

Chester was certain that he could convince his brother-in-law, a physician, to help care for the mother of these unfortunates—if she wasn't beyond hope already. He found that he wanted to help these children, children he had passed a thousand times without giving them a single thought or penny. Perhaps it was the holidays; perhaps it was the throbbing pain in his skull. All he knew was that he would help them tonight. Let tomorrow forget that they had ever entered his life.

By the time the businessman and the pauper entered Mama's room, Spinner and Sal were already beside her. Sal held Mama's lifeless hand in his own while Spinner tried in vain to wipe clean the dark fluid that dripped from her neck. Chester was struck immediately by the vivid whiteness of the woman collapsed on the rat-eaten mattress; she looked as cold as a ghost, as pale as a woman who had never seen the sky. Her dress was ancient and ridiculously fringed with gaudy lace. She looked more like a Luna Park fortune-teller than a mother to twenty children living in a burnt-out stable cellar.

Chester knelt in front of the woman and drank in the loveliness of her countenance; the ghastly light of the sputtering candles added to the oddly Catholic aura about her, making her seem like a sort of Bowery Madonna, peaceful and divine.

Chester went to take Mama's hand from Sal, who released it only after a nod from Tinder. Her hand was as cold as it looked, but it was also exceedingly hard. He dropped it at first, frightened by its unearthly texture. He shyly picked it back up and thin ivory curls of paint flaked off of her fingers; he tapped the back of her hand with his university ring, eliciting a dull clank.

"She is metal," Chester murmured to himself, though all the room heard.

"Show him, Spinner," Tinder said.

Spinner slowly unbuttoned the mother's whalebone corset to reveal a frame of dull iron. Chester held a candle up to the lifelike doll, and in the dancing light he saw the most amazing constellation of gears and springs he had ever witnessed. They looked almost natural, like metallic moss, intricate and interconnected. He was overwhelmed by the hundreds of tiny clockworks, counterweights, and pendulumsand he had seen a great many machines in his time. He had been the chairman of Schneider & Harlowe Metalworks, the largest machine shop on the Eastern Seaboard. He had made hundreds of thousands of dollars by supplying precision metal works for all sorts of projects, including the new subway and the amusements at the Steeplechase Fairgrounds.

Spinner pointed to a small tin plate attached to the front of the automaton's chest:

P. A. Schneider & C. D. Harlowe 1856

"That's you. Chester Harlowe, right?" Spinner said proudly.

"Yes. No. I mean that is from my company, but surely you do not think.... Listen boys. I am, I mean I was, a businessman, but I am quite retired. I owned the company that may have made some of these parts, but by the looks of it, there are all sorts of parts in here. This plate, this might have been from one of our steam wringer-washers, but the rest of this machine.... I can assure you I had nothing to do with this ... woman."

"But its got your name right here, right as rain it does," Sal interjected, holding up another candle to cast more light.

"Yes. It's a mistake. My machine shop may have made that piece, but it had nothing to do with her assembly. Whoever made this was a genius. An absolute genius. This belongs ... I don't know where, but certainly not here."

"What is that supposed to mean?" Spinner said, a sinister undertone creeping into his voice.

Tinder came between the two. "She's our mother, mister. She's the only mother any of us know. If you think you can take her.... She will stay here, that's for sure. Can you fix 'er?"

"No, I can not," Harlowe replied, raptly staring at the intricate brass lace of the mother's metallic organs.

Tinder whispered to Spinner, "Then we must find this Schneider."

Harlowe overhead them and answered: "Listen boys. You don't want to do that. He can no more help you than I can. You need ... I don't know who you need. But Schneider cannot help you. It's very complicated ... everything is counterweighted. Look, this spring has come off its hook."

Chester replaced the spring and immediately the lifeless hand in his lap opened and closed. Mama's left eyelid started to flutter and he could not help but let out a startled cry.

"It's really quite amazing, and it's all in pretty good order. This gear needs oil, that's plain to see. And here's probably the reason why: that tube, near her neck, it's leaking. No oil is getting through," he said, pointing to the vein-like intake tubes. "I'm not sure what this does, but it is connected to a whole string of other gears. Get me a little oil, and some wax to seal this hole."

Chester lost track of time as he tinkered with the automaton; he was shocked to find so little wrong with it. Within the first hour he had been able to get her to sit up and move her arms, back and forth, in a cradling motion. He found that by applying different amounts of pressure the limbs would react differently: sometimes they would cradle a baby ghost and other times they would gently reach out and pat an invisible child. He even got her to play patty-cake once, but could not replicate the feat. And every time he fixed one thing he had to realign the counterweights and pendulum.

Sal and Spinner were exhausted, both their kidnapping adventure uptown and their worry wearing them down. They slunk away to join the other children in the main room to sleep. Only Tinder remained behind to hold a candle for Harlowe. Not even Wild Kip, the oldest Runt before Tinder had known the whole truth behind Mama. In fact, an Italian clockmaker had built the automaton many years ago. The poor clockmaker had no children of his own, and—lacking in proper work—had owned a pushcart that sold molasses candies. Eventually he had befriended a number of the street children that would buy his penny wares. The clockmaker had built a machine from scrap so that the orphans could know the love they had never been spared.

Harlowe was able to guess parts of this truth as he uncovered pieces of countless different machines investigating the orphans' mother. He found telegraph striking-posts used as balance levers and mason jar locks twisted into springs. He found bits of debris from all over the city cunningly arranged, and the businessman in Harlowe marveled at their economic ingenuity even as the hobbyist engineer despaired at the chaotic array that impeded his repairs.

Chester was a man who had never used his hands or mind to make anything but money, but that night found him actually working, repairing a physical object. The sweat trickled down his neck in the muggy basement, he could see the oil tanning his fingertips, and he could feel the satisfying snap of a perfectly placed piece.

"Surely, the children must know that this is a machine," Chester said to Tinder, wiping down one of the six Italian-language phono-disks that gave voice and song to the automaton.

"Some suspect it when they get older, but by that time they love her dearly. She's always there with a song or a hug. Mama is our first memory, for many of us." Chester shuddered at the thought of children knowing of love from only a machine. He thought of his own childhood, of his affectionate mother and house-keeper. His own first memory was riding a wooden horse, his father beaming down at him from under his broad mustache.

Tinder, reading the pity etched in Harlowe's face, stood up proudly. "Listen, Mister. We got it pretty good, better than most. We got each other, and older Runts that are gone still know where they came from and they look out for us. Besides, we got it."

Something had changed in Tinder; it was the first time he had referred to Mama as an it. And with that, he knew he was no longer a Runt. Seeing the rich man working on the machine—the machine that had been his sole source of love for his entire life—he realized it was a soulless thing, a cruel parody of life. He didn't like thinking that way, but he knew now that he would never be able to return to his childhood beliefs.

"Just finish up and I'll take you home. The streets here are not safe for a gentleman," Tinder said coldly.

"I would like to see what else she can do, maybe hear one of these disks. Are they lullabies? Or something more?" Harlowe asked, carefully replacing the soft wax disks on a spindle in her throat.

"No." Tinder said, pulling a cigarette from his pants' cuff. It was the first time he ever smoked in front of Mama, and he felt cold. Something was gone.

A crescendo of childish screams echoed throughout the cellars, intermingling with the gruff shouts of adult men. Tinder stubbed out his cigarette as he rushed out of the room, leaving Harlowe to hide behind Mama's wide dresses.

After much commotion from the common room, two cops yanked down the tattered dividing curtain, their bull-faces burning red with exertion and predatory excitement. Harlowe peeked out from behind the automaton, shy with fear.

"Mr. Harlowe? We're with the Met," one of the coppers said, wiping the blood from his hand before extending it to the cowering gentleman.

"You don't understand..." Harlowe muttered.

"He's got blood on his face," the older bull said to his junior partner, "He's dazed. Get him home; there are enough boys to chase the rest of the vermin down."

The officer yanked Harlowe to his feet and half-dragged him through the ex-stables that glowed with small fires and were dense with smoke. Here and there a small figure lay still, some still clutching for an absent friend. Though most of the Runts appeared to have escaped, Harlowe wondered if he would be able to forget the night so easily after all.

Out on the street, new snow fell, lost among the smoke. The bells of the season drifted softly to his ear, faint against the agony and rage that foamed and screamed throughout Hell's Kitchen.

NEAL WAS NOT-SO-GENTLY TAPPING HIS AX handle against the sleeping legs of Pip. Roused, Pip rubbed his eyes to see that Neal was wearing his war-leathers.

"What's the big idea of..." Pip said, rolling over.

"There's a riot," Neal shouted with childlike enthusiasm, waking the others, "those damned cops are raiding the Runts' nest. They been rounding up street kids all night beating them senseless. We should get down there. The Dead Rabbits are already on their way. It's going to be a good dance."

"The Runts?" Calamity asked as he rose from bed. His voice sounded like it came from the bottom of a well.

"Yeah. I guess they grabbed some mucky-muck at the square. In his own god-damn house. Those kids got more guts than sense. Pip you coming?"

Pip reluctantly stood and grabbed a nearby length of chain.

Professor gently nudged the sleeping Mathilda.

"It seems the cops are smashing heads over at the Runts. Neal and Pip are off to join the riot."

"So go if you want," she said without opening her eyes.

"No it's not that.... It's just ... they are only tots. I don't know."

"Everyone was child once, nothing special about that," Mathilda said dreamily. "Come back to sleep."

This seasonal shows us the perennial truth: that truth, itself, is overrated. From the story of Harlowe and the Runts, we learn that disillusionment is a powerful factor in maturity, and that goodwill may manifest itself in the unlikeliest of places.

Interview With Michael @

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MICHAEL MOORCOCK IS, IN MANY WAYS, A LEGEND. THE AUTHOR OF MORE THAN 70 novels and journalistic works, Moorcock did much to humanize the mythical hero figure. He also pioneered the steampunk genre, before it earned its name, with his 1971 novel "The Warlord of the Air" that strays into the political sphere (collected with its two sequels as "A Nomad of the Time Streams"). He was a heavy influence on Hawkwind, a 70's rock band that he occasionally toured with; Hawkwind in turn was a major influence on punk. Moorcock was cordial enough to answer some of our questions.

illustration by Tim Wilson



Many people have attributed the birth of steampunk to you; this seems fitting to me since you were an early influence on punk as well. Do you have any thoughts on the current state of a genre you helped to inspire, or thoughts as to what it could be?

As an 'intervention' into a particular kind of Edwardian fiction, I think the [Nomad In The Time Streams protagonist Oswald] Bastable stories did their best. I never expected it to become a subgenre.

I understand that you ran a magazine, New Worlds, with some people in the late 60s that, in one version of the story I heard, was condemned as leftist propaganda, for obscenity in the other version, but risked losing its funding from the Arts Council in both versions. Can you clarify this for me?

We weren't condemned directly. The right wing press would from time to time attack us as an example of what the left wing government was allowing. The Daily Express asked me "Mr. Moorcock: Would you like your children to be reading this sort of thing?" "They're five and six," I said, laughing. "I'll be grateful when they can read anything." The big distributors were more worried about 'pornography', though there was nothing visual in our magazine that couldn't be found pretty much anywhere. We weren't interested in 'breaking taboos'. We were interested in writers and visual artists wanting to express themselves as thoroughly as possible.

I've read once that Hawkwind was the kind of band which would go to the bar with the audience afterwards, and in most of what I read you seem to refer to your book's audience as composed of "readers" rather than "fans". Do you think that it's important to tear down the metaphorical stage? If so, how can this be done?

There are various ways—drinking with audiences is a good one, certainly. There is no gap between you and the audience as long as you don't let one grow up. It's all to do with your mind set. If you want to be a 'rock star' then by god you'll

probably be one... That's what bodyguards exist for.

In a one interview you said "As punk sank, like hippies, into mere fashion, I lost interest." I fell into the basement show anarcho-punk scene in some-

thing like 2002, and I have to say that, although it may have missed a beat, punk at the moment can be a lot more than fashion. What were the aspects of punk that attracted you to it in the first place?

Punk had the same idealism as whatever bohemian movements came before it. I welcomed punk because I welcomed the idealism. Punks liked Hawkwind because they thought we were sticking to the ideals rather than holding out for record deals and big money and so on. We really did see ourselves as a 'peoples' band and so we had no difficulties with a shift in audiences any more than I did. I was cheerfully writing "The Great Rock N Roll Swindle" in 1980.

Not many of our readers are aware that you designed the chaos symbol that is so

prevalent in punk and traveler culture today. A lot of people associate its history with TSR and D&D, but it started with you. Are you aware of the perhaps thousands of people with it tattooed who are doing things like riding freight trains and fighting against environmental degradation? How do you feel about the new life that this symbol has found?

Given that I drew the sign on our kitchen table when I was trying to think of a good sign to indicate 'Entropy', I had no idea it was going to taken up by so many. Though I suppose it's not surprising, since the [Role-Playing] games are based firmly on the main heroic fantasies series. So much is lifted, especially from me and Tolkien. I rather like the asymmetrical version first drawn by Walter Simonson and now being increasingly adopted! Nice to see it

We were sticking to our ideals rather than holding out for big money.

sticking warping and changing to suit the times...

I was wondering if you had any opinions about the current intellectual property debate? Concepts like Creative Commons are gaining

ground among many contemporary writers and artists while increasingly restrictive Intellectual Property laws are being passed in many countries.

I've watched most of my ideas go into the public domain and hung on to one or two of the salient ones. It's flattering and it's disappointing. You create particular images for particular needs, both philosophical and creative and when those images are co-opted for dumb reasons it does tend to take your breath away. But there you go. Yena flipped down her mask and began to play. The house-reed hummed, the cylindraphone sung and Fera beat the robot-bits in front of him with abandon. Fera and Set sang and the audience danced chaotically, and Yena's stress began to dissolve as she fell into the drunken stupor of performance. Her fingers splayed out into chords and melodies effortlessly and she even began to grin. **??**

Yena of The Angeline and the Tale of the Terrible Townies

Serial Fiction by Margaret P. Killjoy Part One: Of steam Music, Squatters, governmental Machinations, and sail Busses

Scorching blast of heat came from the iron-bellied boiler as Yena opened the hatch to triple-check the engine. She could feel the flames through the glass of her facemask and she slammed the door shut almost immediately.

"Don't worry," her sister clucked over her shoulder. "We've done this a dozen times at least."

"Yeah," Yena muttered, "but never with an audience."

Yena was the house-reed player and primary mechanic for Bellows Again, a three-piece punk band local to The Vare that had yet to play a show. She walked back to sit before the keyboard of her instrument, the tools hanging from her coveralls jangling reassuringly as she went. Given enough time, she knew she could fix anything. The trouble was, she wouldn't have the time while she was playing.

She raised her facemask up and leaned towards the brass mouthpiece suspended from a tube in front of her. "Testing," she spoke, and the words echoed throughout the empty club, amplified by soundhorn. She stepped hard on a pedal and the machinery to her left came to life.

A massive bellows began to breathe enormous, as tall as a person when fully extended. Double-action, it pumped air on both extension and compression, the constant cycle of inhale-exhale that had endeared Yena to the instrument in the first place.

The staff of The Cally Bird filtered into the room at the first rumble of mechanical breath. Yena saw Annwyn—a thin, severe sculptor who often lived upstairs—and caught her eye. They smiled, briefly, and Yena turned back to her keyboard, pressing a key and routing the bellows' breath over a large brass reed. The club shook with the note's slow power, and Yena smiled again. She was surrounded by her friends, she was safe. When she let go of the key, the air was diverted back into bypass mode, and only the slow breathing remained.

Fera, their diminutive and adorable drummer boy, tested his vocal soundhorn and engaged the wheel of the drum machine. The geared wheel would spin without effect until he triggered the drum-rod via foot pedal. At that point, the next tooth of the gear would send a piston against a drum the size of a wasteland shack. Fera had drumsticks and a drum kit of abandoned contraptions splayed out in front of him for every drum noise higher than "boom."

Yena's twin sister Set played the cylindraphone, a high, wailing counterpart to the house-reed's bass hum. "A bit like the difference between us," Set had mentioned to her when they had formed the band, "only in real life, I'm a lot louder than you."

The cylindraphone was a lever-operated bank of spinning lead cylinders, each inscribed with a sine wave. The pitch rose as the rotation gained speed. Dozens of needles led the sound to a series of soundhorns placed throughout the highceilinged club, but they merely created a ghostly presence when played alongside the house-reed.

After their brief equipment test, the band quieted. People from all over The Vare were coming into the concert hall now, mostly squatters and youth that Yena recognized. An awkward, gangly kid with a two-decimeter mohawk ducked through the doorway and Yena reached up to touch her own mohawk self-consciously, but she remembered it was covered when she felt the leather skull-cap which protected her from the heat and steam.

The space filled all too quickly and soon the setting sun cast sharp shadows onto the wall. Set nodded to Yena, and Yena struck another long, low note. Conversation stopped and she released the key.

"Welcome to The Cally Bird," the trio said in unison, and the audience cheered. "We are Bellows Again!"

Yena flipped down her mask and began to play. The house-reed hummed, the cylindraphone sung and Fera beat the robot-bits in front of him with abandon. Fera and Set sang and the audience danced chaotically, and Yena's stress began to dissolve as she fell into the drunken stupor of performance. Her fingers splayed out into chords and melodies effortlessly and she even began to grin.

A blast of steam against Yena's mask woke her to the realities of mechanical musicianship and at the next break between songs she discovered the offending loose bolt.

She rose, wrench in hand, but a pounding shook the walls. She looked to Fera, but the drum-wheel was not engaged. She cursed under her breath and moved to shut down the steam engine.

A bald woman came barreling through the audience, her scarf trailing behind her. She conferred with Set briefly and Set spoke into the soundhorn while Yena diverted the steam out the flue to the roof and the skyline above.

"Punks and pilgrims, I've got some bad news. But first of all, don't worry." Set ran her hand through her close-cropped blonde hair as she spoke, a nervous habit that meant she was worried. "So just stay calm. The Townies seem to be at the front door, and of course they are hopping mad. Looks like there are too many out there to fight, tonight, so I suggest we disperse through the tunnels, orderly, and meet back the night after tomorrow, before sunset, so we can talk about what we ought to do, see if we need to strike."

To their credit, the audience moved calmly to the trap door hidden beneath the steps at the back of the hall. Yena wanted to fight—she was sick of running, and was pumped full of stage-fright adrenaline—but she trusted her sister's judgment on the matter.

She closed the oxygen intake of the boiler, suffocating the flames, and collected a few of her tools before walking over to join the conference between her band-mates and Suyenne, the bald woman.

"Hey," Set welcomed her sister, putting an arm over Yena's shoulder. "Suyenne says we should go. She'll stay here." Yena nodded. "What do you think they want?" "Same thing they always want," Fera answered, sweat dripping down his shirtless barrel chest. "They want us to start paying taxes or something, or rent on a building none of them built. To join in their ridiculous charade. But Suyenne, I'll stay too.

I figure there ought to be two of us here, on the off-chance they get in." Annwyn, the sculptor in residence, sauntered

over, leading an awkward young man with the healthy tan and clueless face of a runaway from the Waste. Besides the six of them, the room was empty.

A finger-thick red line was tattooed down Annwyn's swarthy face and neck, starting below her left eye and disappearing into the unbuttoned neck of her filthy work shirt. Her face was a smear of grease, which meant she had just come from working upstairs; Annwyn would rarely let herself be caught underdressed.

"Can you all take our lost little lizard here with you when you go?" Annwyn indicated the young man, who did indeed look overwhelmed. "I've got to see to some things."

"Sure!" Set agreed immediately and Yena looked the boy over. He was handsome, to be sure, and probably only a few years younger than them, maybe eighteen or so. Cute and clueless, just the way her sister liked them.

Annwyn squeezed the boy's shoulder affectionately before disappearing down the steps herself. After luck-wishing the two who were to remain, the sisters and the stranger descended.

A FIFTEEN-MINUTE WALK FOUND THEM SPRAWLED on the floor of a large one-room shack. It was adorned by a large canopy bed and three-metertallbookshelves filled to overflowing. The floor was packed earth, the windows were barred, and the only entrance to the street was a steel door that was currently blocked by a stone as tall as Yena. The sisters had lowered it into place by way of a block and tackle of chains that led from the rock to the roof to a winch set into one wall, while the newcomer looked on quietly.

"So what's your name, lost little lizard?" Yena asked him.

"Icar," her sister interjected, "His name is Icar. We met him last night."

Yena laughed as she remembered. "You came in with Fera while we were playing Garakka?"

"The card game?" Icar asked.

"Yeah, yeah... the card game." Yena replied. The fast-paced game, Yena's favorite, was the way they whiled away time at The Cally Bird before the shows started. "So... first time in civilization?"

"Yena," Set admonished, "could you be ruder? We were strangers here ourselves, not so long ago."

"No," Icar said, "It's alright. And while we Of the Waste might be more civilized than you credit us for, I left my tribe for a reason. This is my second day in The Vare."

"Well, you fell in with the right crowd, I assure you." Yena took a thick book off the shelf to use as a pillow. "My sister is right, by the way. We haven't been here so long ourselves. Less than a year. Tonight was our first show."

Set stood up suddenly. "Hell!" She went to the window.

"What is it?" Icar stood as well.

"I saw someone looking in."

"Think they saw us?"

The door was shook with violent force.

"Yeah, I think they saw us." Yena still lay on the floor, her voice clear of emotion.

A rhythmic pounding, like that at The Cally Bird, began against the door.

"What're we going to do?" Icar asked nervously, palming a knife from a pouch on his belt.

"Do? Nothing." Yena reached into the chest pocket of her cover-alls and pulled out a thin

cloth-wrapped package. "They can't get in, we can't fight them, and there's nothing we can do until Annwyn gets back and tells us what the hell is going on. We're going to sit down, maybe play some Garakka, and try to get some sleep."

Reluctantly, her sister and the new-comer left the window and joined in the game. Icar had to learn the rules, so Set instructed, and slowly the game picked up its pace until they were tossing the thin metal cards back and forth with abandon; the Townies outside were successfully ignored.

After a few hours the pounding relented. Yena put her cards away and pulled off her leather boots. She sat down on the edge of the wool mattress, unclipped her utility belt, emptied her various pockets into her shoes, removed her cap and lay down to sleep. On the other side of the bed, Set was doing the same. Icar curled up on the floor under his greatcoat, and the squatters slept.

"Come on now, wake up!"

"No way in hell." Yena refused to open her eyes or even identify the speaker by voice.

"Blast it! You're coming with us today. I need your help. You're the best mechanic I can find by morning light."

Yena sighed and opened her eyes to a tall, thin silhouette: halfshaven head of otherwise long hair, pungent odor of pheromones and engine grease, harsh poetic voice. It must be Annwyn.

"Come on, I packed us picnic. We're going to see the woods."

"What? How?!" Yena was awake. She saw Icar and Set standing at the window, peering through the bars.

"We're going to see the old woman of the mountain. I commandeered us a sailbus. But we have to go now if we're going to get everything we need and leave with twilight before us."

Yena had her shoes and belt on in moments, but fussed with her cap. She wished she had a chance to put her hair up; she liked to be pretty around Annwyn.

Annwyn read her mind. "You'll have time to get cleaned up on the way, I'm sure. I know how to sail." Annwyn had changed from the night before, wearing a leather greatcoat cut to maximize airflow and minimize her exposure to dust and sun. Only a thin, tan V of her chest was exposed by the open collar.

"Is the street clear?" Yena asked her sister.

"Street's clear."

Yena ratcheted the stone back to its place above the door and the four of them stepped outside onto a broad, empty city street, deep in the industrial district. The sun was newly emerged and Yena estimated that they had slept three hours.

"See that," she overheard her sister tell Icar, "those marks in the dust are where the steam-ram was set up. And if you look closely, you can see the trail that the tread left on its way coming and going."

"Same idea as the drum-machine?" Icar asked.

"Same idea. What's worse, we invented it. The Townies adapted it for battle, though."

Yena wished the squatters had thought of it first, though the invention predated both her immigration to The Vare and her hatred for Townies.

"Who are the Townies exactly, anyway?" Icar asked.

"Oh," Set replied, "everyone else."

THE BUS ROCKED BACK AND FORTH ON ITS WHEELS once they had pedaled it out of the city and onto the open plains, and Yena was grinning behind her captain's goggles. A trip by sailbus always put Yena in a better mood, and though she resented her sleep deprivation, she preferred the morning light and the lonely road.

"I can sail us, you know," Annwyn said from her seat behind the captain's chair.

"I know. But, with my sister fawning over that boy...."

Yena couldn't see Annwyn grimace at her words, so she continued. "He seems okay, I guess. But awfully inexperienced."

The two were out on the driver's platform. There was a wheel for steering the mainsail with two smaller steering wheels set within it: one to control the foresail and the other to steer the wheels on the axle beneath them. One lever was used to raise and lower each sail, a third to apply the brakes. Behind them was the cabin, an enclosure eight meters long by four wide by two high. Inside that were Set and Icar.

"Where'd you get this thing?" Yena asked, changing the subject.

"Someone lent it to us last night."

The two sat in front, mostly silent, just watching as the dusty wasteland went by for the rest of the two-hour ride.

YENA BROUGHT THE BUS TO REST NEAR AN OASIS at the base of the west hills. The city lay behind them; the downtown skyline still visible, and a purple-green grass lay in front of them.

The group disembarked and Annwyn produced a basket woven from copper wire filled with food and a blanket.

"Weren't joking about that picnic," Set observed.

"Why is this oasis here?" Icar asked.

Annwyn sighed. "What kind of question is that?"

"No," Icar continued, "I mean, why isn't anyone living here, defending this water, these plants?"

"The water is poisonous, Icar. All ground water east of the mountains is poisonous," Yena answered him, annoyed as one might be with a curious child "if you sow here, you reap only death."

Icar was silent. Yena realized she was being too hard on him.

"Well, we've got lunch!" Set tried to recapture the spirit of a joyful picnic. "We've got ... buffalo meat in mushroom sauce, shelf mushrooms in a blood sauce, and oh! Two oranges!"

Yena missed Angelina, her home city, exactly twice a day: luncheon and supper. Say what you will about the authoritative government, obsession with obscure gender roles, and mandatory work scheduling, at least the land was fertile enough for plants. One day, she thought, she would go back and see the oppression ended. They ate in a calm silence, and soon Yena and Annwyn were on their way, leaving the others to watch the bus.

THE AIR GREW COLDER AS THEY ASCENDED AND Yena pulled up her hood. The path was rocky but relatively stable, and the pair had no trouble finding their way. Yena had only been up to see the old woman of the mountain once before, when Annwyn had brought her to be introduced.

It was several hours before they reached the small patch of woods. It was protected on all sides by steep cliffs, exposed only as one edge touched against a poisonous creek. They hopped the creek at a narrow bend and were soon lost in trees.

Trees were the stuff of legends. The Vare was situated on the High Waste, east of the mountains. Far, far to the west, at the end of the railroad, lay Angelina on a misty coast. But even there, the only forests were those of bamboo and other grasses. In the Northwest lay the true forests, where none ventured for fear of the beasts fell anddirethat traipsed within.

Yet these woods, tucked away among the mountains of the High Waste, were unknown but to a select handful of mechanics who had studied with the Woman of the Mountains.

Yena was nervous as she walked through the thick underbrush at the edge and into the forest proper. Flocks of birds adorned the branches like leaves of black and white. Nothing hunted the woods, she knew, but the large raptors seemed to turn a hungry gaze upon her as she walked up the wooded hill.

The two had traveled in silence, but there among the trees Yena felt the need for conversation. "You never explained what we're up here for."

"I went to talk to Gregor." Gregor was a spy, a Townie who fed the squatters information. "He says they're after me. That's why they came to The Cally Bird last night." Annwyn stopped for a moment to get her bearings, and Yena laid a hand on her back in an attempt to be comforting. The Townies occasionally harassed the squatters to join the rest of The Vare's government—or to get them to speed up the natural gas harvesting—but they had never come for one of them individually that Yena was aware of. Certainly they had never come for the object of Yena's unrequited love.

"So what are we going to do?"

Annwyn began to walk again and left the question unanswered for the leaves and birds.

"WHERE'S ANNWYN?" ICAR CAME UP THE LAST hundred meters to meet Yena and help carry the awkward leather sack she bore across her shoulders.

"She's going to be gone for awhile, it seems."

"Oh." Icar looked defeated.

Yena happily shared the weight of sack and the two walked carefully back over the stony ground to the oasis and the bus.

"We've got to go, now. We've got a hell of a lot of work to do before dawn."

They boarded the bus and raised sail back east to The Vare. Both Set and Icar climbed out onto the driver's platform and Yena knew that she ought to explain everything.

"We can't tell anyone we were here today." Yena felt the tug of the winds and reacted unconsciously, pulling at wheels and levers without a thought. "I don't think that the Townies even know the old woman is up there, but it had better stay that way. It looks like they're after Annwyn, but they won't say why. We expect them to raid her house, her other house, at dawn."

Annwyn kept two workshops. One above the club for when she felt social, one tucked away in an opulent residential district for when she wanted more privacy. She mostly built small statues and automatons, and Yena had no idea why the Townies were after her. "Anyhow, we won't be able to negotiate until we put up a fight." She turned her attention to Icar, because she knew he was new. And for some reason all of her antagonism towards him had left when Annwyn did. "See, when the Townies want something out of us, they just raid our building. Unless we resist, we don't even get a chance to talk. Every time they imagine some new gripe, we have to defend ourselves."

"What's the deal with that... who are you all?" Icar had to yell to be heard, sailing as they were into a headwind.

"When those Of the Mountain came down, they found The Vare built and waiting, empty. They settled in and founded a government, a centralized oligarchy. Those who joined, of course, considered it benevolent. But we, the we of a thousand years ago, didn't.

"They expected us to work for the good of everyone, and they created a lower class where none had existed. We never agreed, we never consented to be governed. No one really did anything about until, I don't know, 1060...." She stopped to think and looked at Icar for a moment. "The tribes you're from, they use the same system of years?"

"Yup. It's year 1082 Modern Era, is it not? Over a thousand years since you coast people came up from underground?"

Yena nodded and continued. "In the 60s sometime they revolted, shook The Vare near apart. Did it some good, from what I've heard. But then again, I hang out with the squatters. Anyhow, government has been a remarkably casual thing in The Vare ever since. We siphon gas from the earth for their lamps and stoves, and they leave us alone, more or less. But everyone else is centralizing again, and they expect us to.

Icar nodded. "So tomorrow they raid Annwyn's squat, and we put up a fight?"

Set touched his sinewy forearm with a soft finger. "It's not like you might think. It's all a game, really. No one dies. They'll surround the place and we either occupy it or booby-trap it."

"Which are we doing?" Icar asked.

Yena smiled for the first time in hours. "What do you think?"

THE NIGHT FOUND THE MEMBERS OF BELLOWS AGAIN RE-UNITED, but they applied their skills to more practical tasks. They had returned to The Cally Bird, a building of four stories with an I-beam skeleton protruding with an extra four. Fera had been perched on a platform near the top, spyglass pasted to his eye, and they waved him down. The Townies had never gotten in, he told them with a grin. The door was too strong.

He joined them on the twenty-minute walk to Annwyn's second workshop. It was outside the near-empty industrial district, on enemy territory, sandwiched between houses four times its single-story height. What was more, there was no tunnel access. There was a front door, a back door, and two barred windows facing the street; if they had chosen to occupy it, there would have been no escape.

But if they left it unoccupied, there was nothing to stop the Townies from going in and destroying half of Annwyn's work. What was more, the squatters would have no bargaining power when it came time to negotiate. The Townies knew better than to kill—or seriously injure any of the squatters, because the gas production would stop. So they were setting the house up to look occupied.

Once inside, Yena went to the stone clockwork set into the sidewall and cranked a steel reinforcing plate over the front door. Fera hit a switch and sparks lit the gas lanterns mounted in brackets on the wall. The one-room shack was built similarly to the room they had slept in the night before, but the shelves were covered in miniature metal people, each hand-made by Annwyn.

Yena didn't understand why the Townies wanted the complicated dolls. They were interesting, to be sure, but they were about as dangerous as a pet rock.

Icar untied the leather sack from the mountains and gently emptied its contents out onto the stone floor. It was mostly clock parts, but there was also a thick book of paper-thin metal plates. Each was engraved with machinations and diagrams.

It took most of the night to finish their work, with Yena directing, and they escaped exhausted out the back door shortly before twilight.

"So what's going to happen again, exactly?" Icar and Yena lay on the roof of a nearby building, passing the brass spyglass back and forth.

"They're going to knock on the door. The vibrations will set one clock into motion, the lights will turn on, and copper silhouette plates will block the windows at nearly random intervals, but the door won't open.

"So they'll set up the steam-ram, and bash into the door. The more powerful vibrations will trigger the trap door set in the back of the roof and pebbles and flash-bombs will catapult forward. No one should get hurt too bad, but they'll think we're inside. Eventually they'll let up for a moment. Set and Fera will attempt to negotiate with them. If they get attacked, we rescue them."

"And how many of them will there be?"

"Oh, about forty."

"Alright."

Yena was glad that he showed no fear. Yena was scared, to be certain, but there was nothing that could stop her from coming to the aid of her sister, if need be. When she was trying to comfort Icar, she was trying to comfort herself.

"Remember, this is all a complex game we play. They don't hurt us, we don't hurt them."

"Done this before?"

"Once."

"It work?"

"Yup."

"Alright."

They came with the first hint of color in the sky. It was just like before—three-dozen hotheads, aged twenty to fifty, all men. Why was it always men? The squatters had woman among them, some of them just as stupid and looking for a fight at every opportunity. Like Annwyn. Or herself.

They pedaled the steamram down the street, a minor siege machine mounted with a full steam engine and boiler. It took ten people to pedal along. The mob reached the house and a dozen of them moved through the alley to block the back door.

One older man knocked on the door. The lights inside flickered into life, and soon the windows looked alive.

The men ran hooked a length of chain from the steam-engine to the grill of one of the tiny windows.

"What are they doing?" Icar asked. "Nobody could crawl through there."

Yena ignored him and looked on in horror. The Townies started the machine and ripped the grill cleanly off. The older man raised a pole and smashed out the glass. A younger one threw something inside the building.

A moment later an explosion rocked the street and the roof of Annwyn's shack collapsed.

"It's just a game?" Icar gasped in shock.

Yena stood up. "Not anymore." 🤀

To discover the outcome of this fateful morning—and to learn more of this nearly-fantastical world of mechanics and music, tribes and cities—be sure to obtain the second issue of SteamPunk Magazine.



Abney Park is a Seattle-based ensemble performing danceable ditties laced with old-world ideals and postmodern tech. Diverse instrumentation married to evocative lyrics conduct a shocking love affair with their infectious stage presence. I have taken the liberty of interviewing the gentlemen of Abney Park, who at the time, unfortunately, were the worse for drink. Please disregard the debauchery if you will—the aforementioned contains what little I was able to decipher from their sinful drunken slur.



For those readers who may not yet be familiar, characterize the Abney Park sound with a few choice adjectives. Pontificate about your instruments and their custom modifications, if you please.

ROBERT: Truth is, if you haven't heard it, it's not much like anything you've heard. We've got elements that you're familiar with: dance beats, Middle Eastern rhythms, solo violins and symphonic

orchestration, male and female voice in harmony, blah, blah,

NATHANIEL: At the moment, I play violin and guitar—make and model vary from show to show. I'm always trying out different instruments, much to Robert's irritation. I usually play them both at the same time with the help of my steam-powered pneumatic arms (with the



optional fine manipulation attachments) but they've been giving me all kinds of grief of late. Unfortunately, our next show is coming up too soon for me to really get the arms up and running, so I'll have to swap from instrument to instrument between songs. What a pain. Why do your fans and critics attribute the genre of steampunk to your music, a genre which is as of yet mostly undefined aurally?

NATHANIEL: To be honest, I couldn't tell you what steampunk really means. I mean, we just play the stuff we like and let people tell us what it is. I'm glad you like it, by the way!

ROBERT: From my understanding, "steampunk" is some new-fangled slang word referring to an anachronistic _____ mix of things, old and new, in a way that wouldn't normally be

mixed. If you look at us, listen to us, and read our lyrics, you'll notice things are riveted together in a way that doesn't exactly fit a standard timeline.

Inquiring minds want to know: if you were going to hell, in which circle would you find yourself and why?

ROBERT: I'm still hoping our heroic deeds will cancel out our sins.

NATHANIEL: I've got the all-circle pass with unlimited access. I mean, I'm going to be there for an awfully long time; I might as well make sure I get the best deal possible. Besides, most of my friends are going to be down there too, so it'd be nice to be able to visit them on occasion. **JEAN-PAUL:** Probably the 8th. We've been known to seduce a few audiences here and there.

As time progresses, the modern steampunk isn't just expected to be knowledgeable about the latest anachrotech, he or she is encouraged to look the part as well. Have you any advice for the aspiring lady or gent when it comes to fashionable garb?

ROBERT: I just stitch old junk together, and I'm sure I look like crap. But the ladies on this crew would beat my ass if I suggested that they make clothes for me, and I'll be damned if I'm gonna buy any of the clothes you people have in shops these days...back in my day you could buy a horse or two for what you charge for those ridiculous blue canvas pants everyone is wearing. I've got some shirts I took from a tramp steamer heading to the



new Indias in 1887—that was only a couple months ago, so they are still in good shape. And my boots, well, I've been wearing them for years but they make 'em sturdy in 2137, so I expect them to last a while still.

NATHANIEL: It's true. He really does stitch old junk together. Personally, I like the feel of a well-tailored suit. I think mine might be a few years out of date, but it's still sound and allows me sufficient range of motion to play violin and guitar. In general, my rule of thumb is to show





[Abney Park singer] Magdalene what I plan to wear. If she gives me the thumbs up, I'm golden. If she says I look like an idiot, then I know to rethink my plan.

Hats. Yea or nay? If so, what sort?

ROBERT: People make fun of my pith helmet, but I'll be damned if it hasn't saved my noggin a few times. Things fall...on my head...it happens.



NATHANIEL: A well-fitted hat is always appropriate. Top hats, aviator caps, pith helmets, anything! Unless you've got madscientist hair, in which case you should totally flaunt it!

Is there any sort of object or necessity Abney Park refuses to leave home without?

ROBERT: Eye protection would appear to be a big concern with this crew. It seems silly now, but ever since that old bass player got his eyes poked out by some dancing girl's "falls", we've all wanted to make sure we had some sort of safety lens handy.

NATHANIEL: My violin. Guitars are a dime a dozen, but do you have any idea how much of a pain it is to find a good violin? A good pair of flight goggles and a parachute has always proven useful, as well. As romantic as the thought of going down with the ship can be, I prefer to live to fly another day.

JEAN-PAUL: Rope ladders, grappling hooks and various other quick-exit paraphernalia.

Do tell us a tale of the finest show you believe you've played.

ROBERT: Oh god, they are all such a nightmare. It's a constant stream of one technical glitch after another, and we feel blessed when we aren't run out of town. Look, the only reason we keep doing those damn things is because people pay us...and leave their cars unattended while watching the shows. It's easy pickings, and that's all I'm saying.

NATHANIEL: For me, that show would be our set at Dragoncon 2006. By the time we took the stage at midnight on Sunday, everyone in the room (fans and band alike) had been going close to full steam for the past 48 hours. There were easily over a thousand people in the audience and the energy I got off of them was wonderful. After the set, we spent at least 4-5 hours just hanging out, talking with the fans, signing autographs, and generally having a great after-show party. We made a lot of new friends that night.

JEAN-PAUL: Probably our 1st show at Bar Sinister in Hollywood, Ca. For all intents and purposes we were the only band that night and we totally sold out! Standing room only. The crowd was singing along to every song and energy was

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incredible! Plus the venue is beautiful! It's what so many other places try to do, but fall short. We sold out of everything that night and had people fighting over the scraps. Very satisfying indeed!

Do tell us a tale of the most horrid show you believe you've played.

ROBERT: Where do I start? Tell you what, I'll let everybody else tell you about the time all the gear overheated on stage in Seattle.

NATHANIEL: We played a summer show in Seattle on the hottest day of the year. It was 105 degrees outside and we were in

a venue that didn't have air-conditioning. It must have been close to 110 degrees on stage under all those lights and we were up there for nearly an hour. I don't know about the others, but I went through a couple of quarts of water just to keep myself hydrated. After each song, I'd open a new bottle of water, drain it, and toss it aside just in time to start the next song.

I think it was during the third song of our set that our equipment started to fail. We use the cutting edge of modern computing technology in our stage set and, sadly, that edge gets rather blunted in 110 degree heat. Halfway through the song "The

Eye protection would appear to be a big concern with this crew.

Change Cage" (right before the solo!) the laptop's sound card decided to commit suicide in a loud and raucous orgy of sound. It scared the hell out of me. I thought it was the coming of the Apocalypse! The fans loved it, though. They thought it was all part of the show!

With the help of a few stage fans and a brief reboot, we were back on track. Sadly, the heat only got worse and we ended up repeating this procedure a few more times before the computer well and truly died.

The people in the audience were amazing, though. In spite of the heat, they were dancing and really getting into the music. They even cheered when the songs would cut off in that orgy of apocalyptic noise. It gave me a tremendous boost to see them out there on the dance floor. I couldn't have done it without them.

> Practice makes perfect, as it were. Kindly advise those aspiring musicians among us regarding the style of your rehearsal sessions, and any pointers you might have on the subject of music recital.

NATHANIEL: If you plan to use something on stage, you'd damn well better be using in rehearsal. You need to know your equipment so well that it's entirely second nature. You can't be letting yourself get bogged down in minutiae when you're standing in front of an audience expecting to see a show. Get used to setting up and breaking down your stage gear quickly and efficiently.

As far as actually rehearsing goes, treat every take as if you're on stage. Be dynamic. Emote. Be a ham. Putting on a show is
more than just playing the songs; you have to move and be an engaging performer also. And that takes practice. If you get used to playing a half-assed set in rehearsal, then that's what you're going to deliver when you're on stage.

It's also useful to have a heavy blunt object handy for use during the occasional difference of opinion.

JEAN-PAUL: You have to be able to tell the person next to you that what he/she is doing sucks.

ROBERT: Yeah, sorry about that Paul.

JEAN-PAUL: ...And you have to be able to hear it said of yourself as well. If the band can't do that, then too much mediocre crap will get through and you'll have a mediocre band. At best. But you have to be able to feel relaxed and unpressured so that you can play your best. It's a balancing act. And don't forget, it's just as important, maybe more important, to praise your bandmates when they do something brilliant. Fortunately for me, I get to do the latter far more than the former.

What place do you visualize Abney Park nesting in the current music world?

NATHANIEL: We're just a group of subversives bringing enlightenment to the huddled masses. Our plans of world domination proceed apace. Just you wait!

JEAN-PAUL: As the rulers of our world. Now, if we could just get everyone to tunnel under the fence into our world....

ROBERT: Current Music World? Eh, they kicked us out long ago, and we let 'em, the bastards!! SCREW 'EM ALL, I SAY! We don't need them...*sigh*

For more sober information about Abney Park, view their website at http://www.abneypark.com



MATERIAL COMPONENTS:

OIL MASKING:

- lithographic paint (any color)
- linseed oil
- japan drier (optional)
- something pointy (nail, dentist's tool, etc.)

IRON-ON MASKING:

- laser printer
- glossy inkjet photo paper
- clothes iron
- rubbing alcohol
- roller (optional)
- tray (optional)

ETCHING:

- 2 brass plates
- kitchen scrubby
- steel wool (optional)
- copper sulphate (rootkill)
- non-conductive tub, with lid (tupperware)
- stiff conductive wire (thick copper wire, brazing rod, etc.)
- DC power supply (car battery, DC power adaptor [3-4.5v], etc.)
- 2 alligator clips
- metal polish (optional)
- black spraypaint

Bwa-ha

- clear spraypaint (optional)

ELECTROLYTIC ETCHING

WARNINGS: Copper sulfate is a poison. If you eat it or stick it up your nose or something, your life will take a sharp turn for the worse. Electricity is dangerous. Although most of the methods mentioned below use less electricity than is truly damaging to the human nervous system, we suggest *not* shocking yourself. And thirdly, if you let things heat up too much, they can sometimes catch fire. We really don't see that happening, but well... reader beware. These methods we describe are not 100% safe. Curiously, neither is life.

FOR A LONG TIME NOW (SIGNIFICANTLY LONGER THAN ANY of us have been alive), people have been etching metal plates. Once etched, a plate can be used to print onto paper in a process called "intaglio", or it can be inked and treated as a beautiful piece of art in its own right. Partly owing to our great love of metal objects—and partly because we have yet to experiment with the intaglio process—we present here only the latter.

But most everyone does this etching through a toxic, foul, acidic chemical process, appropriately referred to as "chemical etching." Plates of copper or zinc are immersed in highly toxic solutions, at great hazard to both the earth and the artist. Not very punk.

Fortunately for the world, some artists have turned to another method of etchery, which we shall call "electrolytic etching." The chemical solution involved in electrolytic etching is remarkably less hazardous—though none would be wise to refer to it as "safe"—and it can be used near indefinitely. As a bonus, the same process can be used to *plate* copper onto one object while it *etches* it from another.

We will be using brass plates for our example, because brass is sexy and because it can be purchased relatively cheaply at the hardware store. The same process can apply for copper without changing anything. Zinc or even steel can be electrolytically etched as well, but different chemicals must be used.

THERE ARE ESSENTIALLY TWO IMPORTANT STEPS IN ELECTROlytic etching. First, masking. Second, etching.

Masking is the process of marking off what is to be etched (or plated) and what is to be left alone. Since we will be working with an electric process, masking is accomplished by applying a non-conductive (insulating) material to the surface of the plate, in inverse to the image you want etched (or plated): you are masking off everything that you *don't* want etched (or plated).

The simplest—and for some most entertaining—method is to paint with a non-conductive substance directly onto the plate. We experimented with two different methods: acrylic and oil based paints. Acrylic paint has the advantage of drying more quickly, but the disadvantage of flaking off unappealingly. Oil paint (we used black lithographic ink, thinned with linseed oil and treated with japan dryer to speed up the process) gave us much better results, but we had to wait several days for the paint to dry, and oil paint is significantly more toxic (and smelly) than those plasticy acrylics. When either paint dried, we took a nail and scratched fun little drawings into them.

The other method is useful for those who want to reproduce an existing image exactly. At some point in recent history, people realized that if you ran *inkjet* glossy photo paper through *laser* printers, you could iron the resultant image onto metal plates. Photocopiers are laser printers, so you could theoretically take your image to a photocopy joint and use the manual feed option to put in your own paper. Or, if your image exists in the digital realm, print it out on a laser printer. Either way, you want your print to end up mirror-imaged and inversed (black for white, white for black).

Clean the hell out of your piece of brass, with a solvent like alcohol.

Once your image is printed, place it face down on your brass plate. Turn your iron on to its highest setting and iron the paper: you are trying to melt the toner off of the paper and onto the plate. You might want to try using a roller to keep it pressed down as well. After several minutes, the plate and paper can be soaked in hot water and the paper backing slowly peeled off, using a stiff brush to get every last bit of white off. Honestly, we had very little luck with this method, but Jake von Slatt, our consultant, has repeatedly presented the world with gorgeous imagery by using it. We suspect that we should have tried a different brand of paper. See the bibliography (page 41) for more information on this process.

SO NOW YOU HAVE YOUR MASKED PLATE, AND THE FUN (read—mildly dangerous) part begins. You get to etch your brass plate.

First, an overview: if you run direct current electricity through a solution of copper sulfate diluted in water, between two parallel plates that have copper in their composition (which includes brass), the copper will be stripped from the plate on the positive terminal. Copper will be plated onto the negative terminal.

So you need a source of direct current electricity. Batteries provide direct current, but your wall outlet provides alternating current. One solution would be to use a car battery, although any sort of battery will end up drained and need to be recharged. A car battery *charger* is also a conceivable source. It turns out, by the way, that if you use a car battery, you need to make certain you don't short the leads, as this could melt your wire and set things (like your house) aflame. Also, car batteries are full of acid. Lacking in such monstrous appliances, we opted to obtain a wall-wart DC adaptor from Goodwill. Car batteries provide 12 volts each, and a car battery charger will provide the same, but we were warned that with a wall-wart DC adaptor we ought to stick to something within the 3-4.5 volt range. We found a Nokia phone charger at 3.7 volts.

The more electric power you can send through the solution, the faster the etch, but electricity turns out to be quite a complicated thing, with at least four distinct measurements volts, amps, watts and ohms. Not fully understanding the complicated interplay between these variables, we heeded the 3-4.5 volts advice.

We then cut the tip off the cable, separated the two wires, and stripped the last inch or so from each. But they looked the same; we didn't know which wire was positive and which was negative. We then, with caution so extreme it resembled cowardice, touched the leads of our multimeter to the bare wires. When the meter read a charge, we assigned the black lead's wire to be negative and the red lead's wire to be positive.

We attached little screw-on alligator clips .

The electrolyte itself we made out of a tupperware tub from a thrift store, though any non-conductive container of adequate size would do (the lid is nice to have, however). We took thick copper wire (from the hardware store, or the scrap at a construction site) and formed holders to keep our plates submerged and parallel. It is important that these holders be conductive, and we have read information that states that using the same metal throughout the project is a positive—although not explicitly necessary—thing. We then filled the tub with water and added just a dash of Rootkill, our nealy-pure copper sulfate. Apparently, copper sulfate is also available in a pure form at chemical supply places, and is used in the making of some ceramic glazes, but Rootkill works fine. We just hate advocating something by brand.

We knew that the more dense the solution, the faster the etch, but also the more likely to overpower our meager DC adaptor.

We stirred it up until the water was blue, placed our masked brass plate and an identical but un-masked brass plate into the holders, and clipped on the alligator clips: red, positive, for the side to be etched, and black, negative, for the side to be plated.

We plugged in the wall-wart and waited. After about five minutes, we tested the wall-wart to make sure it wasn't warm. It wasn't, so we stirred in a bit more copper sulfate (after turning off the electricity!). We repeated this every five or ten minutes until the wall-wart was a little warm, and then stopped adding more. Then we waited again. For a really long time.

Our consultant has told us that this part is much more spectacular, and significantly faster, when more power is applied: bubbles, hot water, all kinds of madness.

With our first experiment, we let it etch too long—nearly twenty-four hours—and so the second time we etched it for only 3.5 hours. The second time it worked quite well. But you're going to have to do some experiments to find out how long... variables include the distance between the plates, the density of the solution, the voltage of electricity and the amount of exposed plate to be etched.

Once we had our plate etched, we turned off the electricity, pulled out the etched plate, and washed it off thoroughly. The acrylic was easy to wipe off, but oil-based paint took some dishsoap (ask any painter: dish soap breaks down oil) and scrubbing.

When the plate was clean, we inked it. We used the same black lithographic ink, but less diluted than before. We squeegeed the ink across with a piece of cardboard, pressing down to make certain it was pressed into the etched lines. We then took a spare piece of cloth (surely you sew your own clothes, don't you?) and wiped in circular motions to clear off a majority of the excess ink. Finally, we took a scrap of paper and rubbed the last bits off.

The method that Jake uses sounds promising however, and relies on spraypaint, which is quite useful in its own right:

"...regular flat-black Krylon, and then coat with clear lacquer. I've been spraying the piece, then using a rubber squeegee to gently wipe off the excess paint. Once the paint is pretty dry (20 minutes) I take a paper towel and some alchohol and gently wipe off the haze of paint left on the piece. It's a little fussy... Oh, and I polish it first, it makes the paint easier to wipe off and it's easier to get a shiny finish."

And there you have it: a strange little piece of brass.

OIL-PAINT MASKING:



1—Mix lithographic ink and linseed oil in a cup (which you shall never drink from again). Add a little bit of Japan Drier.

2—Paint the surface of your **2**, clean brass plate with this ink, attempting to create as even of a surface as possible.





3—Wait a long time for it to dry. Inside, in winter, expect this to be several days.

4—Scratch your design into the dry ink with a nail, dentist's tool, staple from carpet, pointy stick, or whatever.



IRON-ON MASKING:



1—Scan your image into the computer. Create a mirror image ("flip horizontal") and inverse the image.

2—Print your image, with a laser printer, onto glossy photo inkjet paper.



3

3—Clean the brass by scrubbing it vigorously with rubbing alcohol. (do NOT drink the rubbing alcohol.)

4—Iron the image onto the clean brass plate, with the iron set at its highest setting. Two minutes may suffice to melt the toner onto the brass.





5—Soak the brass plate in a tray of hot water to make it possible to peel the paper away from the brass plate, leaving the toner behind. This may take about 10 minutes of soaking, depending.

6—Remove the last bits of paper with a stiff brush.

PREPARING A WALL-WART DC ADAPTOR TO USE:





2—Cut the tip off of the wires, pull the two wires apart, and strip each about an inch or so.



3—Making certain that the bare wires are not touching *anything*, plug the adaptor in and touch the leads of your multimeter to the wires (while set to DC-15 or a similar setting: read the multimeter's manual). If the meter reads a current, then your red lead is touching the positive wire. If it is not, touch the leads to the opposite wires and see if it reads a current.



4—Unplug your adaptor. Attach your red alligator clip to your positive wire, and your black alligator clip to your negative wire.

PREPARING THE ELECTROLYTE:



1—Bend your thick copper wire to a shape that will hold your brass plates against the walls of your tupperware tub.

2—Fill the tub with water, making certain to leave an inch or two from the top, to lessen the dangers of spills and the effects of displacement.



3.

3—Place your plate-holders onto the edges of your tub.

4—Add a bit, perhaps a few tablespoons, of copper sulphate to the water, and stir. Don't touch this stuff.



5—When the water is adequately blue, attach the red and black alligator clips from your power source to the copper plate-holders. Turn-on/plug-in your wall-wart.

6—Wait 5 minutes. Is your wall-wart warm to the touch? No? then you can add a bit more copper sulphate (we recommend turning off the electricity first). Yes, your wall-wart is warm to the touch? Then you have added enough copper sulphate. Yes, your wall-wart is *really* warm? Then you have added too much. Unplug the electricity, start over with clean water. But that's wasteful, and generally not good. So avoid that.

ETCHING:

1—With the electricity off, put your brass plates onto the copper holders in the water. The plate that is to be etched is placed on the red (positive) holder, and the plate to be plated is placed on the black (negative) holder. If you are only etching, you still need to have a plate to be plated. Fortunately, the same plate can be plated over and over again.

2—Turn the electricity on.

3—Wait. Keep any cats or people away. Don't touch.

4—To check on progress, turn the electricity off and pull the plates out.

INKING THE PLATE:



1—Clean your mask off the plate; with soap, scrubbing, steel wool, whatever.

2—Polish your plate with metal polish (optional, but a good idea).



3—Spray an even layer of black spraypaint.

4—While the paint is wet, squeegee off excess paint with a rubber squeegee or a piece of thin carboard.

5—Wait for the ink to dry (20 minutes or so) and then use a scrubby, alcohol, whatever, to clean off the excess paint and the resultant haze.

6—Spray with clear spraypaint.



DISPOSING OF THE ELECTROLYTE:

1—First, don't bother. Use it again: it's not used up. If you're leaving to go hitchhiking (and thus getting rid of all excess things), getting evicted, or have some other reason to no longer own an electrolyte for brass etching, then find someone to teach, and give it to them.

2—If you're really going to get rid of it, you *can* just dump it down the toilet without beating yourself up too hard about it. Just don't make it a habit. If you have a septic system, then you should avoid this: it might damage the bacteria. But this stuff was manufactured (by evil corporate scum who don't understand organic farming methods, admittedly) to dump down drains, in order to kill plants.

3—That said, dumping it down the toilet still isn't so good. If you add sodium carbonate (also called "washing soda" and reasonably readily available) or sodium hydroxide (apparently used in the making of meth, and therefore unadvisable as well as less available), you can raise the pH balance up to about 7 or 8, and then it's more okay. Filter out the gunk at the bottom (which is mostly copper and zinc particulates, by the way), and dump the rest of the solution down the drain. Take the gunk to the metal recycling dumpster at the town dump.

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⁴⁴ The foreign gentleman patted the heavy engine of the device affectionately. "You like, eh? Of course you do, no doubt about it. This, my dear, is my latest invention, the Mk. 2-A Self-Propelled Quadricycle. Powered by a fully selfcontainedboiler-drivenpressuresystem, reinforced by heat-trap batteries, driven by genius.... ⁹⁹

G. D. Falksen's An Unfortunate Engagement: A

LITERARY SERIAL IN SEVERAL PARTS

Part One: In Which the Heroes are Introduced, Engines are Examined, and an Explosion Occurs

True and remarkable genius is a rare and felicitous thing, one which arrives often only once in a generation, and when it makes itself known one cannot help but stand amazed at the true ferocity of its intellectual prowess. I consider it my great honor to have known, indeed even to have worked alongside, one such Great Man. Although it is, perhaps, forward of me to say so, I do believe that my good friend Francis Edgar B—, now Earl of C—, must be counted among the finest minds in the history of the world. In a startling turn of events which even the Lord God Himself—please pardon me the blasphemy of my enthusiasm—could not have foreseen, dear Francis saved the British Empire from certain destruction at the hands of vile Continentals—who shall for now remain nameless—and thereby preserved the fate of the very world itself.

The events of which I speak took place in the summer of 19-, a time when the loss of our dearly beloved Queen Victoria-if only she had reigned forever!-was still fresh in the memory of Britania's entire empire. I was fortunate enough to be spending that glorious summer with my dear friend at the family estate in the country. At that time, the then Earl and Countess C— were abroad, leaving the house in the capable hands of Francis, and the household butler, Mr. Waithredy. Comfortably ensconced in most of the eastern second floor of the house since mid-February, I had spent the past several months assisting my dear friend in his various incidents of experimentation, while engaging feebly in my own ignorant attempts when left unattended. With much of the family either married off or abroad, Francis and I had much the run of the house to engage in our childish pranks upon Nature's laws and God's order. In March we had raced Hildebrand motorized velocipedes through the upstairs gallery, foolishly scuffing up the helpless wooden floors and drawing curses from the servants tasked to polish them. Thank God we had the presence of mind to remove the grand rugs beforehand, or else I might well have been cast from the house by Waithredy as a poor influence on dear Francis. Come the first storms of the spring we attached copper wires to a

lightning rod in the South Tower and wound them down to a nickel Edison battery, very nearly setting fire to the servant's quarters in the process. Of course, it was all in good fun, the well-meaning antics of two hot-blooded youths determined to become the next generation of Nature's masters. Come the warmth of summer, Waithredy and Co. were quite relieved when we moved our locus of investigations to the old and disused stables some distance from the main house.

But perhaps I have moved on too quickly and left some mistaken impressions in your minds. You see, the mishaps that constantly plagued our work were never the fault of dear Francis, but rather the expected result of my incompetent bumbling getting into the way of his unimaginable genius. Even the infamous "Glider Incident" of which the servants have spoken even until this year, was entirely my own doing, for it was I who insisted that we attach the gear-driven propellers to a perfectly decent glider, which ultimately resulted in the tragic death of twenty square feet of Countess C-'s beloved flowerbeds. Using a network of clocks, wheels and wire to remotely prepare our afternoon tea seemed like a good idea at the time, in spite of the machine's inability to cease pouring when the teacups were full. The true tragedy was the metal strings that spiderwebbed across the east wing of the house, causing no end of trouble among the servants. Still, Francis called the device an absolute success the first time one of the upstairs maids came running through the house screaming about ghosts and flying teapots.

Now then, returning to that glorious summer, one sunny morning found Francis and myself out for a pleasant ride across the estate, cantering pleasantly through the rolling hills and fields surrounding the house. Tall in the saddle, Francis was truly the image of an English gentleman: collar high, blood-red coat well brushed before wearing, and boots polished to their finest black. I had made all endeavors to mimic the perfection of his appearance, but I fear the end result was somewhat lacking. Even the dear fellow's brown moustache was positively verile, while naturally I was without such. Timepieces tucked away inside our black vests, we were quite the dashing pair to behold, if I may be allowed the liberty of saying so.

Swinging around to the cobblestone walk that led down to the stables, we caught sight of Francis' other guest, the delightful Dr. Bruno von H-, a fellow gentleman-scientist and the only Continental I have met and found as agreeable as any Englishman. Quite the charming eccentric, Bruno could normally be found in proper if somewhat outdated garb: it was his custom to be seen always in a perfectly tailored frock coat of black or gray, highlighted and blues and reds with a matching vest and silken tophat, and always with polished boots instead of shoes. To this day I have never seen the man with fewer than two pocket watches at any time, accompanied by a leatherbanded wristwatch which only he or dear Francis could wear while still preserving masculinity.

Today, Bruno was dressed down for work, his finery replaced with sturdy work clothes normally

reserved for the lesser class of person in this great Empire of ours, including a firm leather vest filled with all manner of pockets and clips for securing the necessary tools of the engineer's trade. He had even gone so far as to replace his customary gold and pearl timepieces with simple watches of hard steel. We could tell he was preparing for travel as his beloved frock coats had been replaced by a long, double-breasted duster of sturdy leather, such as I hear the Americans used to wear in their western territories. Neatly trimmed hair blowing in the morning wind, Bruno raised a gloved hand and waved to us, signaling our approach. As we pulled into the court before the stables I could see that he was busy loading the carrying basket at the back of an abnormally long motorized velocipede. It was a curious machine with four distinct wheels and a veritable battery of exhaust pipes extending out and back from an overly large engine. Indeed, even the driver station was unusual, being much lower in position than a normal "bicycle" seat. Upholstered in red leather with a high back and even armrests, Francis felt this particular innovation deserved special praise. I did not have the heart to tell him that it was no doubt one of the reading chairs from the library that Bruno had surreptitiously obtained.

"Francis! Alex!" Bruno greeted us. "Back from a healthy romp in the meadows?"

My dear companion slapped his thigh cheerfully and laughed. "Not much of a 'romp,' Bruno old man! Much more of a leisurely canter. Good for the buttocks, you know." Bruno's eyebrow arched decidedly at this, and he twirled the tip of his moustache between thumb and forefinger. "Well, yes, if you say so old man."

"And what perilous mischief are you engaged in now, dear Bruno?" I ventured, peering with the utmost curiosity at the dear fellow's curious machine. "And what on Earth is that!"

The foreign gentleman patted the heavy engine of the device affectionately. "You like, eh? Of course you do, no doubt about it. This, my dear, is my latest invention, the Mk. 2-A Self-Propelled Quadricycle. Powered by a fully self-contained boiler-driven pressure system, reinforced by heattrap batteries, driven by genius...."

Such statements were characteristic of dear Bruno, but intended only in the best of sentiments. Many were the dreamy evenings I had spent listening to those two chatting away over cigarettes and billiards, debating the future of scientific discovery. On several occasions I have taken part myself, although I fear that such incidents only display my own ignorance for I have often found myself agreeing more with Bruno's logic and deductions than with dear Francis, a thoroughly inexcusable thing I admit.

"A boiler, Bruno?" Francis demanded. "Why not a common motor?" He laughed freely at the very thought.

Bruno returned the sentiment in good nature. "Francis, you old fool, where would be the fun in that? No, no, the steam pressure is more than sufficient for my purposes, and what's more I can store the heated vapor for later. Insulation, you know." "Fantastic!" I found myself exclaiming, swinging down from the saddle in a rush and hurrying to examine Bruno's work. I could identify numerous sealed capsules of riveted brass latched onto the side of the machine's boiler engine, and connected to the device through heavy pipes with pressure gauges and multi-colored knobs. These no doubt captured released steam that was stored like charge was in an electrical battery, although how Bruno expected to regulate the process was entirely beyond my limited understanding of pressure engineering. No doubt Francis, with his squinting, confused expression had already determined countless flaws in our companion's design.

"So it's um..." Francis mused distantly, "some sort of steam car?"

"Well, yes."

"What an utterly ghastly idea!"

Bruno grinned at the vote of confidence. "Knew you'd like it, old man!" He looked at me with his overpowering cheer and charm. "Right up your alley, eh my dear Alex? Bet you can't wait to take her out for a whirl!"

"Well, I—" was my feeble, half-hearted reply. Certainly, I was truly fascinated by the prospect of trying such an incredible piece of engineering, but as the house belonged to Francis' family it was his right to have first crack at it.

Our Continental friend was not about to wait around for the duration of our decision-making. Swinging into the plush leather chair, he tossed us a cheerful salute. "Well, I'm off. See you two later, eh?" He snapped his gloved fingers. "You ought to come out for a luncheon. Bring tea and sandwiches and all that. Just you two, no servants..." his voice trailed off and for a moment I thought I could hear him murmur 'sneaking, spying Bavarian swine!' although it may have been sometime entirely different. I certainly hesitate to suggest that dear Bruno is capable of saying such horrible things about good, upright English servants. Then, more cheerfully, the good fellow added, "You know, just the three of us."

"Yes, of course," Francis replied, perhaps a bit concerned at the license Bruno was taking with the C— family estate. "Bruno, old man... where exactly are you off to?"

"Why to the dirigible, obviously! I'm not about to let Ferdie von Z— beat me to the air!" And with that, he was away, his curious machine rumbling off down the path as the boiler and pipes shook furiously.

Both Francis and myself knew well what he was speaking of. Since the idea had struck him several months ago, Bruno had been exhaustively engaged in constructing some sort of massive balloon-ship, having commandeered an old barn and decrepit farmstead at one end of the property for such a grandiose purpose. It was always a delight to visit the dusty workshop with its moldering wooden walls, and we often joined in the work on lazy afternoons. Ever the traditionalist, Francis would joke that such a craft would never fly, and to his credit he was most convincing in his insistences. While I am not given to gossip, I will convey that rumor had it that Bruno was paired off against another German ballooning enthusiast to see who would be the first to take flight and thereby conquer the sky. It seemed a touching if unrealistic ambition at the time, for who then could have possibly believed that men would some day fly like birds?

Watching Bruno's departure wistfully, Francis and Iled our horses across to the stables and passed them over for a healthy rub-down. Returning toward the house, we passed a while in idle conversation. I attempted to address the subject of the proposed expedition to Switzerland, a rather brilliant ideal that Francis had put forth while mildly under the influence of drink, but sadly my dear friend was no longer of the mind to consider such things. Evidently, Calais was the furthest point abroad he wished to contemplate while in the throes of sobriety.

At the side door Francis and I paused, thinking better of reentering the house in such clement weather. We took to the garden path, though our riding clothes made us stand out somewhat fantastically among the flora. Carefully avoiding the decimated patches of flowerbeds—and the furious gardener we knew could be found there—we meandered off toward Bruno's makeshift workshop. It was as the footpath wandered so carelessly through the copse of trees surrounding that old farmstead that a singularly terrible and fantastic event occurred, one which hailed the onset of such an incredible happening that to this day I must at times doubt my sanity at the time. But on that pleasant day the first indication we ever received of Continental treachery was so simple a thing that no one could have predicted the monstrous outcome.

With the crash of a thunderclap and a gout of flame rising to Heaven above, the barn which had been haven and laboratory to our dear friend and guest, with singular ferocity and determination, summarily exploded.

Here concludes Part One of my narrative. Dear reader, if tales of high adventure, English chivalry and Continental treachery are your fare, and if you are not afraid of wondrous Science or those who would master its—largely—immutable laws, please await the next portion of this truthfully fantastic tale.

Sincerely yours, A. Westminster, London 19-



GAETANO BRESCI 1869 - 1901

"...that man who had the courage to kill a king... well, that Gaetano Bresci, who had even come from America, that fantastic country beyond the ocean, seemed, in my child's imagination not a monster, but a great hero!"

- E. Arrigoni, Freedom: My Dream

THE COURAGE TO KILL A KI

1900

Gaetano Bresci, an Italian immigrant, was a quiet, sober man by all accounts. A hard working weaver who made a new home for himself in Patterson, NJ as the 19th century drew to a close, he was highly regarded by his peers. He supported a wife and daughter. He helped found and fund La Questione Sociale, an Italian language newspaper of Libertarian Socialism, and had no temper to speak of. He bore a fine, full mustache, the ends pulled to slight curls.

Why then did he abandon his family, purchase a pistol and passage to Italy, and gun King Umberto I down in the streets?

Anarchism was a prevalent political trend of the time-despite the dearth of attention paid to it in modern textbooks-and Gaetano was one numerous thousands who espoused a world of social equity without coercive force. What anarchists agreed upon was the end of a ruling class; what they disagreed on was how to see the ruling class ended.

Some advocated that peace would only come through peace:

The anarchists are right... in the negation of the existing order... They are mistaken only in thinking that Anarchy can be instituted by a revolution."

- Tolstoy, On Anarchy

Others advocated insurrection and revolution. Many felt that only through a combination of education and resistance could liberty be obtained. But one popular trend in the anarchist milieu was that of *propaganda by the deed*.

What was propaganda by the deed, that it shook the world so greatly?

1877

A fellow by the name of Errico Malatesta-who grew a fine beard, but neglected to curl his mustache-was an advocate, and practitioner, of propaganda by the deed. First arrested at the age of 14 for writing a letter to the king in regards to local injustice, who can blame a person born under the yoke of another if they choose to rebel?

Errico and around 30 others marched on two small Italian towns in the Benevento province. They announced the people's liberation from the monarchy and set tax and property records to the torch. A local priest, upon hearing their intentions, announced to his congregation that the anarchists were indeed sent unto them by God.

But the lord of the land felt otherwise, and soon all of the agitators were rounded up and briefly imprisoned. Yet the tales of their action grew more powerful than the brief taste of liberty:

> Take over a commune, introduce collective ownership there,... if attacked, fight back, defend oneself, and if one loses, what matter? The idea will have been launched, not on paper, not in a newspaper, not on a chart; no longer will it be sculpted in marble, carved in stone nor cast in bronze: having sprung to life, it will march in flesh and blood, at the head of the people.

> > - Paul Brousse: Propaganda by the Deed (1877)

Regicide became the crime of choice and legend, as propaganda by the deed expanded from minor insurrections to attempts on the lives of tyrants. The very next year, Stepniak-a Russian novelist who had also taken part in the Benevento uprisingtook the life of the head of the Tsar's secret police; he knifed the man in the streets of St. Petersburg and got away clean. The Tsar himself was soon to follow, along with presidents, kings, emperors and governors.

The anarchists wanted to say to the world, "Hey! You need not play pawn in this life. The state is vulnerable, and the state needs to be held to account. Join us, for liberty!"

Shortly we will return to our humble weaver.

1898

King Umberto I "The Good" was about as popular as consumption. Having turned his attention towards colonizing Africa, he paid no heed to the starvation that grew rampant in Italy. Social unrest reached a head in the first half of 1898, and by May the peasants demonstrated outside the palace in Milan. General Fiorenzo Bava-Beccaris turned cannon upon the crowd, killing between 100-350 and wounding about 1000.

The regal response? Umberto decorated the general.

Back to the great state of New Jersey, where our father, husband and anarchist toiled so vigilantly.

1900

When Gaetano made up his mind to end the imperious reign of Umberto I, he spoke of it to no one. He needed no party's permission to act, no conspiracy to bolster his strength. He just needed some money.

He went to his comrades on the newspaper and requested that they return his loan of \$150, but would not tell them why. The paper was destitute, and it was only with much grumbling that they obliged him.

Bresci took leave of his family and returned to Italy. Two months later, on July 29th 1900, he waited for the King to emerge from a gymnasium where His Royal Highness was awarding medals upon athletes. Umberto began to drive away, and Bresci put three bullets into him before being apprehended. With a pistol and courage summoned only from his own convictions, Gaetano had meted out a justice that could have been provided by no state.

The double-edged sword of authority leaves a leader responsible for the actions of their subordinates. It should always be so; indeed, it is perhaps the only justification that can be found for the hierarchical structuring of people. A king should be held accountable for the actions of his general, a general should be held accountable for the actions of his soldiers. When this is forgotten, blame is dispersed so greatly that it allows the soldier to turn the cannon on the people. The rest of Gaetano Bresci's life was short and nearly formulaic. He was tried and sentenced to life imprisonment on a penal island. Within a year he was found hanged dead in his cell.

His friends back in Patterson who had so misjudged his character chose to adopt his daughter.

But propaganda by the deed wasn't all beautiful rhetoric, murdered kings and martyred militants. The anarchists, by design, had no leaders and no centralized council. The same freedom that allowed Bresci to plot his deed—which the editors of this paper consider indeed praiseworthy—this same freedom meant that horrific actions could be carried out without restraint. There were regicides, yes, but there was also terrorism:

In 1894 a Spaniard by the name of Emile Henry shocked the mainstream populace and radicals alike when he threw a bomb in an upscale cafe. One person was killed and many more were injured. On trial, he was unrepentant. "There are no innocent bourgeois," he declared, as part of his defense to the court. He was guillotined.

And yet, for over 15 years to follow, this was an isolated incident. For every anarchist assassin, there were thousands of working-class unionists, educators and activists. And for every Emile Henry there were a hundred anarchist assassins who would never harm an innocent.



MURDERERS, ONE AND ALL from left to right: King Umberto I, Stepniak, Emile Henry, Prime Minister Cánovas del Castillo, Michele Angiolillo, Luigi Galleani

In 1897, Michele Angiolillo was about the most gentlemanly killer you could ever hope to meet. Having traveled to Spain from England, he tracked the Prime Minister Cánovas del Castillo—responsible for violent repression and many political deportations—to a resort spa and shot him to death. "Murderer! Murderer!" Michele heard, and the Prime Minister's wife came to the scene of the crime.

Bowing to her, Michele spoke, "Pardon, Madame. I respect you as a lady, but I regret that you were the wife of that man."

The assassin then allowed himself to be captured—so as to minimize the reprisal on his peers—and was executed by garrote in less than two weeks.

And yet *propaganda* by the deed wasn't working; individual kings died, but monarchy did not. The people were not spurred, it seemed, to some glorious revolution, and the attention of the anarchist movement turned back to trade-unionism. Only a few remained convinced of the political righteousness of murder; of these, none were more dangerous than Luigi Galleani. The father of modern terrorism, Luigi advocated large-scale and nearly indiscriminate assaults on the bourgeois, but never practiced as he preached. Instead, the Galleanists did. Never trust someone whose followers describe themselves as someone-ists, and never trust someone who holds the opinions of someone else higher than their own. From 1914 to his deportation from the United States in 1919, Luigi—who, we must admit, also bore a fine mustache oversaw or influenced dozens of bombings and poisonings. Yet most of the bombs were intercepted, went off unexpectedly, or otherwise misfired, and it was often housekeepers, bystanders, or the assassins themselves who paid the price.

The name of the anarchism was forever mired with terrorism, and forgotten were the bold folk who fought *against* systematic violence. It takes courage to stand alone against injustice, to stand before your betters, spit in their face, and refuse. It takes much less to leave bombs on the doorstep of their lackeys.

Postscript

Is steampunk anarchist? No, it is not. Ought it be? Probably not. In our ranks there are enthusiasts from all about the political spectrum, to be sure. Yet the punk movement was intentionally one that stood against authority, bravely defiant. The anarchists were among the punks of their era—they stood by their ideals despite overwhelming odds. Although they are mostly lost or misrepresented in the annals of mainstream literature, they had what very few had: the courage to kill a king.

They also had, it can be noted, quite stylish dress and manners despite their lower class.





MAD SINGER OF MARVELOUS MECHANICAL MUSIC

I know people ask you about your instruments all of the time, but I'm afraid we must. We're quite a bit interested in applied acoustic mechanics, so as much technical information as you can spare would be appreciated by us all. Tell us about the hornicator: how is it built, what can it do? It uses physical objects to create distortion and reverb?

I'm not really an electrician or engineer. I've always liked to build things; I've gleaned a lot of knowledge and experience from my days with puppets and moveable miniatures used in stop-motion animation. That probably also has something to do with the strong anthropomorphic element in my 'instruments'. I really do see them as little beings, bandmates, if you will. We do spend a lot of time together. I also did time working as a prop and set builder for theater and television; that certainly comes into it.

Recently I played a corporate Christmas party—not the kind of gig I usually do—but it paid well and they were all engineers. They offered me a job at their firm afterwards! I said I had absolutely no training as an engineer and they told me that that was why they wanted me, implying that somehow having a proper education in this sort of thing somehow corrupts the inspiration quotient or something.

Anyway what I do is set out to find a way to make an idea happen; it's mostly trial and error, and the fun part is that often I wind up with something completely different than I set out to create. The Hornicator is a good example of that because it was just a nice old gramophone horn from a roadside 'junk' shop that I thought would add a nice visual element when attached to one of my rhythm machines. But aesthetically, it wasn't happening. However, I started tapping on the thing and singing into the big end of the horn (one of my techniques is to always try something backwards) and it dawned on me that it was originally created as an audio amplifier, and had a certain nice tonality of a certain flavor that hadn't been heard in ages by most people. So I attached a microphone element to it and started sticking things in and on it. It's now got fretted strings and springs on it; its structure lent itself to a harp-like set up.

Springs are fantastic; everyone loves 'em, everyone uses 'em. Stretch a spring across almost anything, put a mic or pickup on it and you'll get something as good as coffee in bed. Spring doorstops were endlessly fascinating to me as a kid. I could lay on the floor for hours snapping those things with my ear pressed to the door happily absorbing the reverberation. Once someone came through the door while I was doing this and I've had an injured neck ever since. There's one of those on my instrument 'the Stringaling'. There's a very long spring attached to the small end of the Hornicator, which has a cup-like 'receiver' on the other end. This was something my brother sent me for a birthday present. A 'Space Phone'. When we were kids we'd make these by attaching two plastic cups with a long string between. When you stretched it and spoke into one end, the person on the other end would hear a kind of martian version of the voice of the other person vibrating down the line. This was a marketed version of that, but lucky for me the spring was the exact diameter of the small end of the Hornicator. Pull that spring and it's got this great wobbly sound that reverberates through the horn. Sometimes, as one part of my performance, I sing into one end and listen through the other as if it were a giant phone.

So for me it's not only about thinking up and making instruments for anyone to play in the usual sense, it's really a combination of many different angles. Often an instrument is added to and developed, or even built, to accommodate a specific THOMAS TRUAX BUILDS HIS OWN FRIENDS, AND FROM THAT HE HAS BUILT HIS OWN CAREER. HIS BAND IS COMPOSED OF MECHANO-ELECTRONIC CONTRAPTIONS THAT HE HAS DESIGNED HIMSELF, BUT HE DOESN'T GET BY ON SCHTICK; HE CROONS HIS WELL-WRITTEN, POP-SENSIBLE SONGS BEAUTIFULLY.

> He is, perhaps, the perfect steampunk singer-songwriter; he dashes about the globe with his bandmates in his suitcase, doing a ridiculous amount of work on his own. What's more, he was born and raised in Wowtown, a town in upstate New York that has physically seceded from the United States of America and relocated to the Atlantic Ocean. If that isn't steampunk, we don't know what is.

Our interviewer tried to fly to England to interview the man in person, but settled for interviewing Thomas via pneumatic tube.

new song. Sometimes a song is altered or built by some accidental new dimension or discovery with an instrument, so it goes both ways. And I'm always thinking in terms of not only audio but also performance, storytelling, and play.

manna

People have asked me if I can make them a Hornicator or a Spinster, or even tell me flat off that they're going to rip me off and make their own. What they don't get is that what they're seeing me do is an amalgam; the instruments are born of and interwoven with my personal obsessions and fascinations and accidents and experiences, etc. Not to get too highbrow about it, but they are like individual sculptures. It took me a long time to realize it myself, but if you want to do something different, you've got to let your own imagination fly free; these things wouldn't be the same in anyone else's hands. What people really need to do if they want to go in the direction I'm going is find their own direction, let their own imaginations go. Someone more knowledgeable about electronics and acoustics than I will certainly come up with things that are acoustically better than mine, but people would also argue that it's the lo-fi aspects, the shortcomings, that give some of the sound-making contraptions I build their

unique personalities. The 'distortion' you asked me about is most likely accidental, but man, it can be nice! Someone better at mechanics could certainly set up a wheel that would turn more smoothly, but then it might lack that tension or uneveness that developed from my shortcomings. I'm constantly and pleasantly surprised by what I get away with.

I'm just a kid at play really. As soon as I get too serious, as soon as my mind goes closed rather than open, the creations get lame. Usually they come together organically, so I don't do technical sketches beforehand. All I can offer are kind of cartoon doodles of my instrument ideas, though occasionally I do sketch out 'Green wire in A to blue wire in B' sort of things when the going gets rough.

Sister Spinster was designed to be a foldable, portable mechanical drum machine. How is it programmed, and how do you control its speed? And why didn't I think of it first?

I had to suffer through a lot of human drummers before I decided I'd had enough and that it was time I built my own. If people don't show up for rehearsals again and again you will eventually be driven to turn into Dr. Frankenstein. I thought how nice it would be to have a drummer that always played steadily, without fancy selfindulgent solos, who would shut up at the turn of a switch, who could sit on a shelf at home and not eat all your food. Who could be folded into a suitcase, and so on. She's built of found objects mostly, though there is a little drum and cymbal that just sounded too good to pass up. There's a piezo mic from Radio Shack glued straight on to the cymbal with epoxy. It's tiny but it sounds like a gong.

One of the drums can be slid along a track to accommodate different settings of the mallets. The mallets are TV arials attached to wheels. The arials can be extended or retracted, in order to set up different rhythm patterns. They are dodgy parts and break often—they weren't made to play drums, after all—but I carry spares. There's a motor and a speed control. There's a great surplus shop on Canal street in New York City where, if you're lucky, you can find these sort of things. Now that I'm in London I miss it.

There's the internet too, but I shy away from it; if you can't tap on it to see how it sounds, or turn it on and see how noisy it is, you might find yourself with a regrettable purchase. I guess I've also got



this kind of dumpster-zen thing going on, where there's a faith that the next thing you need will come into your life one way or another if you keep your eyes open.

I'm not the first person to put a motor on a wheel to make a rhythm, though I think I've taken it further than others. I think that's mostly because I have a limit to what I can carry on planes and trains—that's how I often tour so I've had to make the same machine do more. Even so, sister Spinster's rhythms are very rudimentary. There are people with computer controlled robot drummers that are much more impressive in a lot of ways. I just feel a lot more comfortable with mechanics and visible physical reactions that I can grasp in my little ball of grey matter than I am with ones and zeros. I think a lot of people feel this way these days, and that's why I've had luck with finding audiences. At the same time I'm no purist. Digital technology has opened a whole new box of tools and possibilities. With some of my contraptions I use a digital looper pedal. But live I never use anything pre-sampled, I always play it live into the looper, otherwise I don't feel like it's really live.

The backbeater is an interesting fusion of form and function, a balance that is quite dear to our hearts. What kinds of limitations did the design impose on the function, or viceversa?

As far as limitations go, (aside from its irritatingly unreliable in-flight steering mechanism) because it's on my back and out of reach it's pretty much impossible to manually change the rhythm setup (as I would with Sister Spinster) without having to remove it again, which would put a dent in the flow and momentum of the show. So I usually just do a one-off song with the BB. But one of its finer features is that because it's on my back and thereby shielded from a direct line to the monitors by my body, it doesn't cause feedback problems like some of the instruments do, even when it's up real loud.

In a strange way, a one-person band is perhaps the ultimate manifestation of DIY... you build the instruments, the songs, and your business yourself. What's more, you stand as strong evidence that DIY work can be taken seriously. What do you think are the major advantages and disadvantages to doing this work yourself?

Well, the main disadvantage—that I've seen become more and more pronounced as time goes by—is that one person can only stretch themselves so many different ways until they're spread too thin. You can miss opportunities and start losing your mind and run into problems in your personal life when things start expanding. I haven't spent enough time 'playing'—i.e. building instruments, writing songs, etc. these last few years because I've been on the road more and more. I definitely am DIY to a fault; I just don't wanna let go of control, and I'm not very good at asking for help. I'll be the guy that'll put off dying an extra few hours because I want my grave dug just a certain way and won't trust anyone to do it right but me.

But no one is good at everything. The trick is finding people that can do the stuff that you can't, or that are better at things than you, and who want to be involved. Or that you can afford to pay. I've got an agent, which has been hugely helpful, but I wouldn't appreciate her as much if I hadn't booked my own shows and tours in the beginning and learned what a pain in the ass it can be, and how time consuming it can be. And in fact I wouldn't have an agent at all if I hadn't built up a fanbase on my own first.

So you hail from a small island that recently seceded from the USA? Was the secession politically motivated? Or does the move into the ocean provide better opportunities for fishing?

Yes to both questions. Wowtown seceded in a sort of collective-unconscious psychic joining of the local community immediately following Bush's re-election. The resulting energy field was so strong that it lifted the land-and Wowtown on its surface-like a giant cupcake and floated us out to sea. It wasn't an island when we were attached to the US, but now floating in the Atlantic Ocean, yes the fishing is superior to what we had before, with just the lake.

It's understandable that off-the-beatenpath musicians are wary of finding themselves labeled. It seems inevitable that once a person has been described, the industry and press want to box them

in. We at SteamPunk Magazine are of course interested in steampunk, but as a description instead of a definition. What are your associations with the label?

A theremin/violinist that I sometimes work with, Meredith Yayanos, sent me an email and in the subject line it said: "HA HA! You're STEAMPUNK!!" She'd been

The next thing you

need will come into

your life one way or

another if you keep

visiting the Dresden Dolls forum online and there was an argument, or a thread, on there, about what was and what was not Steampunk. Someone brought up my name as the perfect definition. To be honest your eyes open. I was unfamiliar with

it at that point, but I liked it and found the associations complimentary and interesting, so I just threw it on the myspace site. But you're right, I don't much like labels, and am quite happy with what I typically hear people tell me after shows: 'I've never seen anything else like it'. That sort of thing is much more complimentary to me than being associated with something or some scene already established.

You've stated before that you build your instruments out of junk, including from the bounty of dumpster diving. What are some of the best things you've found in the trash, aside from musical components? Have you had any crazy experiences while dumpster-diving?

Well, I got into a great deal of trouble with the New York Department of Sanitation when I was putting something back into a dumpster once. It was some dismantled studio pieces when I had to move from my last apartment. I won't go into it because it's mundane but I would warn anyone not to even throw a plastic cup in a dumpster that is not your own in NYC. They are

very strict about this stuff, they've got their electric eyes everywhere, and I wound up having to pay a ridiculously huge fine.

It is amazing what people throw away though. I've found functional bicycles, stereo components, a nice

bedside table. A coffee mug with Elvis on it, which, when you pour hot water in it, turns into later-period Vegas Elvis. Rockclimbing equipment (handy to find in a really deep dumpster). But it's always the thing you think you'll need or want and *don't* take that you will need or want the very next day, while other things clutter up your corners for years untouched.

And finally, what sorts of instruments do you envision you would build if your space weren't so limited and your schedule so intense?

I don't know yet, but they'll come. I'm going to try and de-intensify my schedule and show us both.

> Thomas Truax can be found online at http://www.thomastruax.com



The smokelung played an accordion, he realized, and the airlung was playing a wooden violin. He was a worldly fellow, but he could barely contain his horror to see someone play on tree flesh. His father before him had outlawed such barbaric practices years ago. And yet the music was powerful, hypnotic even. **??**

The Baron

A Short Fancy of Airships, Smog, and Questionable Friendship written by J. T. Hand

he Baron was not an evil creature, whatever history might claim one day. He ruled a vast section of the infamous Empire, but he was no tyrant. He demanded obedience when he issued an order, but he mostly left people to themselves.

The Baron ruled from his airship high above the land. His skin was as white as pitch is black and his clothes were gray-white and ashen. The oil that fueled his galleon's propeller spat the loveliest pale smog.

The Baron breathed smog as you or I breathe air. He took a deep breath every the morning as he walked out of his cabin, savoring the thick, succulent poison that sank to the deck from the balloons that kept him aloft.

His subjects feared him as they would a dragon and no one spoke to him but when commanded. Even those down below who breathed smog as well, the smokelungs, avoided him, so tremendous was his ill-deserved reputation for villainous cruelty.

Thus the Baron lived in the loneliness known only to the rich, and no amount of reasoning or gift giving would unfetter him from infamy. He spent his days writing, watching the land below, and composing music. In the heart of his metal ship was a calliope, a great steam music box. He would write compositions and then send for engineers to create the studded, mechanical wheels that dictated the pitch and rhythm of the calliope.

It was one day early in his reign that a flock of birds, madly fleeing an oncoming storm, tore apart all of the balloons which kept him afloat. Quickly, the Baron inflated the emergency balloon, but it only served to slow his fall.

He fell through lightning and rain to crash, unharmed, into a vast industrial forest of pipes, silos, fire and smoke. The smog was fresh and the Baron breathed easily, but his airship was dashed and dented beyond any hope of immediate repair.

The Baron was not young, and had been through his share of adversity; he was quite used to taking care of himself.

"I'll just walk until I reach civilization. I will commission a new ship," he reasoned, "and my duties, to be honest, are few, so my land will be alright until I return to the sky."

With only the clothes on his back and a canister of crude oil, the Baron left the bird-and-gravity shattered remains of his old life and took off through the mechanical wilderness about him. His spirits were high—it had been years since he last visited the wild lands, the lungs which made the atmosphere habitable for smokelungs like him.

It wasn't long before he stumbled upon a camp of travelers, hearing their music long before they became visible in the thick air. Ten or twelve men and women sat in a circle while in the middle a pair of young women played outlandish instruments. To his amazement, a few of those present, including one of the musicians, wore gas masks—the sign of an air breather.

"Stranger!" A man called out, "Come sit with us awhile. It isn't easy to wander." No one else spoke, and the musicians showed no sign of abating on account of him, so the Baron quietly walked over and sat on a half of an oil barrel before turning his attention to the two women.

The smokelung played an accordion, he realized, and the airlung was playing a wooden violin. He was a worldly fellow, but he could barely contain his horror to see someone play on tree flesh. His father before him had outlawed such barbaric practices years ago. And yet the music was powerful, hypnotic even.

Wisely, the Baron said nothing of his station and kept his revulsion for the barbarous airlungs from marring his expression.

The air became dark, as it is prone to do, though the sky was not visible through the haze. The Baron stayed on with the vagabonds. Almost all of them played instruments and those that didn't would dance. He wasn't certain they would ever stop. By the middle of the night, the Baron took off his boots and slept by an oilcan fire with his greatcoat as a blanket. He dreamed tremendous musical dreams. The next morning most of the revelers were asleep, curled together like a litter of kittens; the only waking soul was an airlung keeping watch. For the first time in his life, he spoke to someone of the old world.

"Who are you people?" The Baron asked.

"Well, I am Ashen. My name, that is," she answered, her voice strangely muffled through the mask, "but as for the rest of us... let me try to explain.

"Last night you heard us play music. Most of us sing, or dance, or play an instrument. Having learned one of these things, the others are easier. Do you practice the arts, Mister..."

"Mister B—," the Baron introduced himself, "and I paint. Sometimes I compose, but I cannot sing or dance."

"Ah, but you could, you could. The painter can dance, the singer can write. One informs the other. In truth, there is no other." She paused before her next point. "The one is the other, the other is the one. Now, here is the secret: this is not some magical solution to anything. Understanding the oneness of the universe doesn't just make everything okay.

"So this is who we are. In the same way all dance and song are the same, so are all living things."

"This metaphor, then, you carry it across..." the Baron began but Ashen finished his thought.

"Everything," she nodded, "but it isn't a metaphor, it is literal. Music is the wild. You have your wild here, and I have my wild..." Through the mask her expression grew heavy. "We are a group of people who have sworn to uphold the balance of the wilds, organic and mechanical."

Throughout all of his life, and certainly throughout all of his reign, the Baron had almost

mindlessly promoted the expansion of the industrial forests at the expense of the organic. Indeed, over the whole of the planet's surface the two worlds battled to control the atmosphere.

Two more long, lazy summer days passed in this way of music, dance and conversation by the fires of the wild. At dusk a guard was posted against the hydraulic creatures of the night.

On the third morning they left their encampment and the Baron chose to join them. He was hooked, and when he discovered that they were going to the organic land he was intensely curious.

So great was his new love for these people that he resolved, during the second day, to swear service to their cause. If by life or death he could promote balance and harmony, then he would do so.

When he told his new friend Ashen of his resolve, she laughed and slapped him on the back.

They arrived at the woods after a three-day trek. Initially he was quite frightened. At all times his smoke-mask was visible from the corner of his eyes, and nothing was sane anywhere about him.

But to his word, he spent five years serving that strange alliance. Owing to the present imbalance, he helped the organics reclaim mechanical land. He learned a great many instruments, although he never could bring himself to play the wooden fiddle or guitar. He cunningly planned and schemed against his own lands, and he grew to love his comrades deeply.

Yet at the close of five years, the kudzu and blackberries had spread too far into his old kingdom, threatening the smog his people depended on.

"Ashen my friend," he said, "we need to stop the spread of organic life to maintain the balance." Ashen stayed silent. The Baron spun on his heel to the smokelungs of the group, eying them warily.

Only one spoke, the old man who had welcomed him to the fire those years ago. "The mechanical lands, the mechanical people... us... we have oppressed what is natural for too long already."

"But that would mean your death! Our death!"

"All is one. We cannot truly die."

"Madness!" But the Baron quickly mastered his voice, calming down. "I have been betrayed, I have been so terribly betrayed."

With that he left, and when Ashen tried to block his path and speak to him he struck her down with his fist.

He walked straight to the Empire City, to the emperor himself, and reclaimed his post. And thus he became the Baron whose infamy lives still this day. With a song in his heart and fire in his eyes he used violence and concrete to reclaim his lands for his people.

One day, while teaching his young daughter and heiress to waltz, she asked him why he never took his lands past the great river.

"My daughter, my love, all is one. The airlungs and the smoke."

"Yet father, you kill them with abandon on your lands."

"And thus do we kill ourselves. But listen, there is no shame in killing, and there is no shame in mercy."

The Baron is but one of eight short fantastical tales by J. T. Hand that will fill "The Seduction of the Wind", an upcoming publication by Strangers In A Tangled Wilderness.

VARIETIES OF STEAMPUNK EXPERIENCE

An Essay by Cory Gross

ONE OF THE BIGGEST, AND PERHAPS ODDEST, BONES OF contention in the Steampunk community is not anything so mundane as which movie is better or whether or not the *League of Extraordinary Gentlemen* movie was a complete waste of time. Instead, it is the very name of the genre itself: Steampunk.

Coming from Cyberpunk roots, the name Steampunk is accepted by many, at best, simply by its popularity and the sheer weight of its use. However, there are a plethora of other terms which are floating around in general use, which add to the confusion... Victorian Science Fiction, Scientific Romance, Industrial Age Science Fiction, Industrial Fantasy, Voyages Extraordinaires and Gaslamp Fantasy, just to name a handful. What makes things even more confusing is that there tends to be no quantitative objection to the term Steampunk. That is to say, there are no readily apparent "necessary and sufficient characteristics" that distinguish Industrial Age Science Fiction from Steampunk on any aesthetic or stylistic grounds. William Gibson's and Bruce Sterling's The Difference Engine looks like Sakura Wars looks like Georges Melies' A Trip to the Moon looks like Space: 1889. The only objection seems, on the surface, to be an unfavorable attitude towards the use of the term "punk" in Steampunk.

If there is no substantial quantitative difference between stories about mechanical computers, steam-powered robots, space projectile canons and ether flyers, then the only resolution is to seek out qualitative differences. What is the intangible approach of the story, the particular approach taken with identical Science Fiction conventionalities that differentiates a tale of Scientific Romance from one of Steampunk? This view goes back right to the very beginnings of the genre and Science Fiction as a whole, as it points to that fundamental difference between the two masters and originators, Jules Verne and H.G. Wells.

In order to articulate this difference, we have to deepen our understanding of that variety of artistic enterprise known as "kitsch". One of the most involved studies of kitsch comes to us from aesthetic philosopher Celeste Olalquiaga by way of her absolutely invaluable tome The Artificial Kingdom: A Treasury of the Kitsch Experience, and it is her work which will form the foundation of this article.

To understand kitsch is to understand Steampunk, since Steampunk is, at a fundamental level, a kitsch experience. According to Olalquiaga:

"[K]itsch is nothing if not a suspended memory whose elusiveness is made ever more keen by its extreme iconicity. Despite appearances, kitsch is not an active commodity naively infused with the desire of a wish image, but rather a failed commodity that continually speaks of all it has ceased to be—a virtual image, existing in the impossibility of fully being. Kitsch is a time capsule with a two-way ticket to the realm of myth—the collective or individual land of dreams. Here, for a second or perhaps even a few minutes, there reigns an illusion of completeness, a universe devoid of past and future, a moment whose sheer intensity is to a large degree predicated on its very inexistence." (28-29)

The extreme iconicity of Steampunk, fixated in a nineteenth century that never was and opening up this past that wasn't to imaginative dreams that can never truly come to fruition, is the very essence of kitsch. Though there are pushes to develop Steampunk into a complete subculture and lifestyle—with its own music, aesthetic values, decor, behaviour, philosophy, politics and the like—it can never truly come to pass because the foundational precept of Steampunk—the Victorian Era of Jules Verne—does not exist and never did. Steampunk is forever relegated to a sub-genre of fiction whose most particularly ardent fans may dress up in costumes to emulate. The closest that we may come to the imaginative epoch of Verne and Wells are those constructed environments of Disneyland Paris and Tokyo DisneySea, which shut out the modern world and create immersive but illusory Steampunk environments.

There is not, as Olalquiaga builds her thesis on, "just" kitsch. Kitsch comes in different varities, and in these different varieties comes the qualitative difference between varieties of Steampunk. The heart of this difference lies in human remembrance and how that manifests itself in commodities, whether it forms the souvenir or the cultural fossil. Refering back to another aesthetic philsopher, Walter Benjamin, Olalquiaga states: "[T]here are two basic ways of perceiving events in modern time. Both are connected to memory and may be roughly distinguished as the conscious mode, which leads to reminiscence, and the unconscious mode of remembrance proper." (68, 70) Continuing, she says:

"In consciousness, events are perceived as a part of a continuum of time that is merely conventional. The shocking elements of an event are filtered out, enabling it to be lived as a memorable experience—the reminiscence—that does not disturb the delicate balance of consciousness and can be stored as a memory to recall at will. Consolidated into a perfectly flawless version of itself, the censored event becomes a sort of 'cultural fossil', the static and idealized blueprint of an experience." (70)

Finally this cultural fossils transforms into a new realm of aesthetic emotion: "[C]ultural fossils lead to a nostalgic kitsch

that yearns after an experience whose lack is precisely glossed over by the desire for a utopian origin, producing a perfect memory of something that really never happened." (293)

Where this leads us is to our first, and by far the most popular, variety of Steampunk: Nostalgic Steampunk. In Nostalgic Steampunk we find the creation of the Victorian Era as a Romantic myth infused with utopian desires and generally ignoring the more uncomfortable genuine history of the era. Nostalgic Steampunk—which can operate under the guises of most other terms for Steampunk, such as Victorian Science Fiction, Scientific Romance, Industrial Age Science Fiction, and so on—makes technology the portal of elegant exploration rather than the industrial torture rack of the poor, as brave soliders and scientists of the Crown go on expeditions which don't enslave and destroy the cultures they come across.

The patron saint of Nostalgic Steampunk would easily be Jules Verne himself. The world of Verne was the world of the Voyages Extraordinaires... A place of limitless wonder and imagination which would be explored and innocently exploited for the good of humanity through human ingenuity. Verne was a fan of technology, and many of his Voyages feature now iconic technologies, such as the space cannon of From the Earth to the Moon and the Nautilus of 20,000 Leagues Under the Sea. While we have come to know the story of Captain Nemo today as that of a tortured soul waging war against a system of oppression and in the process becoming exactly that which he fights against (by imposing his own vision of order on the world through violence and technology, murdering and colonially exploiting the sea), the original novel was at first a travelogue of the deeps. A series of episodes connected only by the Nautilus' journey, Nemo falls more into the role of oceanic tour guide than rogue science pirate.

This is not to say that there isn't a self-critical, self-conscious aspect to Nostalgic Steampunk. The observation that Verne wrote about technology while Wells wrote about people and politics isn't entirely accurate. You can't get past the first chapter of From the Earth to the Moon without a biting satire of war, and Verne's first, long-unpublished work, Paris in the 20th Century was a dystopian tale to rival Orwell or Huxley. An ironic playfulness with the absurdity and spectacle of impossibly complicated Victorian technology, social mores and florid prose attracts many to Steampunk.

But nevertheless, Nostalgic Steampunk is the idealized Victorian Era, the nineteenth century as it ought to have been. Nostalgic Steampunk revels, much like Victoriana itself, in the elegance and the spectacle of the Empire. It forgets, or chooses not to remember, the dirtiness and the imperialism of this same Empire. It is found in the gunfights of Wild Wild West rather than those of Sam Peckenpah and in the anthropomorphized fantasy space of Georges Melies rather than the deromanticized visions of Ridley Scott and Stanley Kubrick.

The other variety of kitsch is the diametric opposite of nostalgia. Where nostalgia zigs, melancholia zags; while nostalgia is based in the reconstructed conscious reminiscence, melancholia is based in the intense unconscious remembrance. Olalquiaga distinguishes it thusly:

"Within unconscious perception... there is no erasure of an experience's actual conditions... The perceptual process that

eventually leads to [melancholic] kitsch is that aspect of experience constituted by what consciousness leaves out: the intensity of the lived moment. Anachronistic by definition, the unconscious perception focuses precisely on all those distressing sensations that consciousness cannot afford to indulge. This zealous but transitory moment becomes a 'remembrance'..." (71)

Again continuing: "What matters most for remembrance is what is already gone, that brief instant of splendor where we can envision, through a narrow sliver of our mind, the memories that underlie most daily contingency." (74)

Olalquiaga also makes two comparative points between nostalgia and melancholic kitsch which are very important for our purposes here. First "the yearning of reminiscence is nostalgic and never really leaves the past, while that of remembrance must be anchored in the present to experience the loss for which it melancholically languishes" (74) and,

"Nostalgia and melancholy represent two radically opposite perceptions of experience and cultural sensibilities. One, traditional, symbolic and totalizing, uses memories to conceptually complete the partiality of events, protecting them with a frozen wreath from the decomposition of time; the other,

modern, allegorical and fragmentary, glorifies the perishable aspect of events, seeking in their partial and decaying memory the confirmation of its own the temporal dislocation." (298)

In plain english, melancholic kitsch deals with the everyday, the unidealized experience of an event or a time, reexperiencing it rather than reinterpreting the Victorian era but as an it. Melancholic kitsch remains rooted in the present day, looking back upon the past but through the lens of the present day and the loss of that past. As

Melancholic Steampunk then, we see the very things Nostaligic Steampunk tries so hard to ignore brought out into the glaring sun. We see the corruption, the decadence, the imperialism, the poverty and the intrigue. And we see them not as much as an indictment of the Victorian era but as an indictment of our own, whether directly or by chopping away at our society's Victorian roots.

This Melancholic Steampunk is Steampunk proper, developed as it was out of the Cyberpunk movement which imposed the present melancholically upon the future, decrying what we are presently losing by showing a world where it was lost. This original form of Steampunk is found in the novels which founded the genre, including Bruce Sterling and William Gibson's The Difference Engine, about what might conceivably have happened had the mechanical Babbage Engine computer been developed, or Queen Victoria's Bomb, dealing with Victorian atomic weaponry. A good example, albeit from slightly different genre, is comparing Mark Twain's A Connecticut Yankee in King Arthur's Court with fellow American Howard Pyle's four novel series of Arthurian legend. In Pyle's novels, the Mediaeval world of Arthur is sanitized: there are no serfs or slaves, no dirtiness, no disease, and every sight or fairy or knight is more charming and beautiful than the last. In Twain's satire, all these elements ignored in Pyle are brought to the fore: Connecticut Yankee

We see the the decadence, poverty and the intrigue. And we see them not as an indictment of indictment of our own.

focuses exactly on the gross inequalities and corruptions of the Mediaeval system in only a barely veiled commentary about his own time.

The patron of Melancholic Steampunk would be the other father of Science Fiction, H.G. Wells. Diverging from the pattern of Verne's Voyages, the Scientific Romances Wells wrote had the science act as little more than a portal through which he laid out this particular observation or that particular philosophy. The Island of Dr. Moreau, for instance, is a self-admittedly "blasphemous" work eviscerating religion through the premise of vivisectioning animals. His most well-known novel, War of the Worlds, takes a direction which would have appalled Verne (or at least his editor, Pierre-Jules Hetzel, who initially refused to publish Paris in the 20th Century). In War, superior and fantastic technology becomes the death knell for humanity when wielded by an alien menace. Our own technology, the height of military power in giant guns and battleships, is as useless as spears and rocks in the face the Martian heat rays and black fog. Technology not only fails mankind, but actually goes so far as to spell its doom. The only thing that saves our species is a simple bacterium, the simplest, most unevolved form of life on earth.

> This is the diametric opposite of Verne's idealism and Romanticism, which would have technology holding the potential for human salvation as well as human annhilation.

> Melancholic Steampunk is a difficult genre to appreciate because it is so challenging. It is said that Cyberpunk specializes in exposing the reader or viewer to worlds which they shouldn't want to live in, and Cyberpunk authors are well known for eschewing technology. Bruce Sterling is one of the driving forces in a movement towards technology which more transparently shows the consumption of energy, while William

Gibson was famous for writing out his novels on a typewriter. However, many Cyberpunk fans find themselves nostalgically ignoring these facts and long instead for the very worlds of cybertechnology, hackers and black rain they write about. Melancholic Steampunk similarly creates a Victorian era which, much like the Victorian era itself, no sane person should want to live in, as opposed to Nostalgic Steampunk's Victorian era of aesthetic beauty and grand exploration.

How useful these distinctions between varieties of Steampunk are is naturally an open question. Many Cyberpunk enthusiasts consider Steampunk, "true Steampunk" as they know it, to be a short-lived and dead genre. Many Steampunk enthusiasts don't care either way, while others balk at the use of the term Steampunk at all. The application of concepts related to kitsch do provide an interesting groundwork, however, for attempting to wrap one's head around all the various different terms that are applied to this broad genre, even as the term Steampunk reaches greater and greater degrees of popularity and common use. 🏶

Reference:

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DARCY JAMES ARGUE TELLS US ABOUT HIS SECRET SOCIETY, ECONOMIC EMPIRE, CULTURE AND JAZZ. photos by Ben Anaman

DARCY JAMES ARGUE IS THE BANDLEADER AND COMPOSER FOR SECRET SOCIETY, AN 18-PIECE BAND IN NYC. FIRST FORMED IN MAY 2005, THEY HAVE PLAYED SHOWS AT SEVERAL NYC VENUES INCLUDING CBGB, UNION HALL, THE BOWERY POETRY CLUB AND FLUX FACTORY. DARCY GRADUATED FROM NEW ENGLAND CONSERVATORY IN BOSTON IN 2002 AND COMMUTED TO NEW YORK WEEKLY FOR A COMPOSER'S WORKSHOP BEFORE MOVING TO BROOKLYN IN 2003. ONCE IN THE CITY, HE STARTED READING SESSIONS TO FIND MUSICIANS WHO WERE CAPABLE OF—AND EXCITED TO BE—PLAYING HIS ORIGINAL AND CHALLENGING COMPOSITIONS. FOR TWO YEARS THEY REHEARSED IN VARIOUS INCARNATIONS BEFORE THEY PLAYED THEIR FIRST GIG.

Argue describes the work as "steampunk big band" and after downloading his music from his website and blog [http://secretsociety.typepad.com] I immediately noticed why; when you listen to the music you are transported to a sinister yet beautiful world, a past that never was.

He agreed to meet with me at a cafe in Cobble Hill, Brooklyn. His face was ageless; had he told me he was 20 or 34 I would simply have nodded and believed him. I drank tea while he spoke of his band-fellows, the political situation of music, steampunk and Jazz.

Do you always have the same musicians when you play?

I have a core of musicians, but with 18 people on the gig, it's not always possible to get the same players every time. Usually there's enough carry-over from gig to gig that there is some sense of continuity, but obviously that's one of the challenges of running such a large band—the personality is going to be slightly different every time.

You seem to have a lot of respect for the musicians, and you write about them as being an important factor in the work.

Bless these guys for doing this thing; it's incredibly difficult music that involves a lot of rehearsal time, and they're certainly not making very much money on these gigs. They're doing it because they enjoy the challenge of the music that I write. As a composer there is nothing more gratifying than having musicians at this level, people like Ingrid Jensen or Matt Clohesy, really interested in playing your music. They have a lot of other more lucrative opportunities they could be pursuing.

What is your role as a leader of all of this, how authoritative do you have to be?

Well, I guess the best way of putting it is that it's like the players are voluntary citizens in a benevolent dictatorship. The music is through-composed and pretty finely detailed in terms of the notation. There's definitely room for improvisation from the soloists, but they don't get to dictate the direction of the music. Their improvisation can't just be what they were working on in the practice room the day before, or what they might play in a small group setting—the music has a story to tell and their improvisation has to serve that script. I think that the players in the group understand that; they still find a way to express themselves and be personal and creative but within more narrowly defined constraints.

Do you make your living through what you're doing?

I'm fortunate enough to make a living in music, but I definitely do not make a living on Secret Society. At this point I have to finance my big band habit by other means; I'm a freelance music copyist who prepares music for Broadway and film. The software that I use to notate my music is called Finale and I do Finale clinics in schools and for other professionals. I'm also an arranger and orchestrator.

You currently give away all of the Secret Society music away online for free. Why did you choose do to that?

The challenge for a musician in the age of mp3s is to try to persuade people to listen to your music. I mean, they can download anything for free; what's going to make them want to give your stuff a shot?

The clips that I make available are live performances that I record on my digital recorder, with all the glorious imperfection that a live gig entails. Eventually we'll make a studio recording, where we're going to get to spend more time shaping the sound

of the music. I hope that I've built up enough goodwill with the people who've followed Secret Society so far, so that when there is a product that they can buy, they will help support what we're doing. But it just seems foolish for artists to try to control access to their music, because people can always go elsewhere.

You give your scores away on your site so that people can download the actual sheet music. Have you heard from anyone who has used it?

Well, those scores are there mostly for evaluation purposes if someone has a big band of their own and would like to play the music, then I guess they could theoretically generate the parts for each individual musician from that score, but that would be an incredible pain, and it would be far easier for them to just buy the parts from me. But they are there in case bandleaders want to see what's in the music and whether it's playable by their group.

I also hope that other composers who are interested in my music take a look at those scores, see what I did, and ask me about it. I hope that as the blog grows we'll have more of those discussions online, because I'm definitely interested in talking to other composers about how they solve the same kind of problems that I try to solve.

One of the first things I thought of when I discovered your music is that it is one of the most original things that goes by the name of steampunk. And one of the things I like about it is that it is a reasonably modern style but is playable with old instruments.

First off, I don't want to present myself as some expert on steampunk literature or culture because I'm not. But I couldn't resist appropriating the label because it seemed like an excellent shorthand description of what I was after with Secret Society. We are using an almost archaic instrumentation—when you say "big band" people think of ballrooms in the 30's, [songs like the Glenn Miller Orchestra's] "In The Mood" and that kind of thing. Musically, that kind of thing bears almost no resemblance to what we're doing, but there is something about that instrumentation that is very appealing to me.

In a way I'm trying to use this antiquated music technology, this group of largely acoustic instruments, to replicate the things in contemporary music that I really like. If I'm listening to a record by TV On The Radio or something, one of the more appealing things is the intricate layering of the production. Having so many musicians on stage allows me to have that same layering, that same kind of detail, but I'm able to do it live and organically with acoustic instruments.

I think of the problem-solving you mentioned as relates to mechanics and music...

This is something I got from my mentor, Bob Brookmeyer, who I studied with at New England Conservatory. He viewed composition as exclusively problem-solving. I guess for me it feels more like storytelling, but of course when you sit down and try to figure out how to structure a story, that requires problemsolving skills.



For a while I was kind of obsessed with screenwriting blogs on the internet because you have a lot of people talking explicitly about the challenges of structuring stories, debating the merits of techniques like the three-act structure, the sequence model... That really resonated with what I'm trying to do musically. I'm trying to get from one moment to another without interrupting the flow; I'm trying to build up a certain amount of musical momentum. Where did you first run across the aesthetic or concept of steampunk?

Like a lot of people, I'm sure, the first time I heard the label used was in relation to Alan Moore's *The League of Extraordinary Gentlemen*, which I was very taken with, being a huge Alan Moore fan. But the word seemed to also describe things I'd read that I guess aren't normally considered part of the steampunk canon, like Thomas Pynchon's *Mason & Dixon*. That was the first time I had really encountered such an incredibly rich and creative use of anachronism. The entire novel is written in this faux-historical style-it uses the archaic capitalizations and abbreviations and whatnot that evoke the 1700's, but it's more about creating an effect than being a literal facsimile of 18th century literature. It grapples with some of the fundamental questions of modernity and colonialism, the idea of going westward, of literally inscribing the mark of progress on the map. It really highlights the ironies of how the scientific and intellectual advances of the Enlightenment were bound up with the violence and brutality of slavery and colonialism, the idea that we were bringing civilization to "savage" lands through the use of incredible savagery.

The first time I wrote any music directly inspired by literature was after reading *Mason & Dixon*—I wrote a piece after one of the characters, a Chinese surveyor and Fung Shui practitioner named Captain Zhang.

Both Mason & Dixon and The League Of Extraordinary Gentlemen got me thinking about using an anachronistic framework in order to comment on the modern world. This is exactly what I'm was trying to do musically, taking this oldfashioned instrumentation and making contemporary music with it.

What do you feel we have to learn from a time of empire and colonialism that relates to our present situation, both politically and musically?

Well, when the vice president can get up there and claim, on television, that the Iraqis will greet us as liberators, and not be laughed off the stage, obviously we still have a lot to learn. It's not really clear to me that we are past a period of colonialism; it just takes new forms. Certainly with the child labor that's happening around the world you've got a really insidious kind of economic imperialism.

You have monopolies and cabals that dwarf the famous railroad trusts of the 1800's. For example, Universal music group just got the go-ahead to buy Bertelsmann [BMG] which will result in 3 major record companies in the whole world that are largely controlling people's access to music. Not just what gets played on the radio, not just what's available in the few actual CD stores that are left, but —because these media companies are vertically integrated—what music gets inserted in TV shows and movies and commercials. Even what gets talked about on the internet. If you look at the music that's illegally downloaded, it follows the pop charts very closely. So it's often very difficult for people to even find out about music that doesn't have big corporate dollars backing it in some way.

So I think that these are issues that everyone trying to do something independent and creative and off the beaten path has to struggle with, whether politically or artistically.

It seems like many of the battles we're facing now, our struggle against preemptive wars and inequality and economic imperialism, are a continuation of the battles that the anti-imperialists, suffragettes and trade unionists fought in the 19th century. These are battles that require constant vigilance and constant participation.

What do you think that you can be doing as a musician, in the music you make, how you make it and how you promote it, to have that constant vigilance?

It's an interesting question whether or not purely instrumental music can be political music. Certainly some of my works have political meaning to me, and I hope convey some of that with the titles. But I also hope that the songs work independently of any extra-musical associations—that they work as pure music.

I didn't mean just through the music itself, but also about staying independent.

Well for a jazz artist, independence is by necessity as much by design. But I also feel that there are a lot of opportunities opportunities and obligations—for artists to take control of their music. You see more and more people self-releasing records or putting them out through a cooperative venture like ArtistShare [www.artistshare.com] that allows them to own their work, instead of signing it over to a label.

I guess one of the challenges is that, if everyone is independent and self-releasing their records, then how do you engage in some sort of collective promotion? How do you make it seem like what you're doing is part of a movement? Because if it's all just individual people doing their own thing, it's hard for a scene to emerge out of that. It's hard for something like that to develop any momentum, which is why it's important for jazz musicians especially, who tend to be very insular, to try to reach out to other musicians in other genres who are pursuing common goals.

How did the blog come to be?

I was reading a lot of political blogs, and it was through political blogs that I discovered the music blogosphere. I was a little bit jealous of the scene around the indie rock blogs because it seemed like there was a real community there; people were excited. It wasn't that there were that many more people going to indie rock shows than were going to indie jazz shows at Barbès or Tonic, but there was much more of a sense of excitement because people would write about it on their blogs. People would come back from shows at the Mercury Lounge where there were maybe 25 people in the audience, but they would have taken pictures and maybe made a bootleg recording or just written animatedly about what went on. There was a real sense that, okay, so there were only 25 people in the audience, but it was important.

There's nothing really like that on the jazz side. When I started blogging I was one of the very few jazz oriented blogs. My original goal was obviously to promote myself and my own music, but it was also to promote the music of my peers and colleagues, who were playing gigs that otherwise got no notice at all.

I hope to see more musicians, especially musicians in the jazz world, take up blogging, because I think it's a way to try to start a conversation about this music, to get some debate going, some back and forth, some sense that this is vital music that matters to people's lives.

Find mp3s, scores and blogging online at http://secretsociety.typepad.com

Earth Sea



HUNTING THE OSTRICH.

Here, for our reader's enlightenment, we have excerpted from the excellent tome "Earth Sea and Sky" published in 1887. The following is the faithful reproduction of pages 299-305, which concerns itself primarily with the grotesque "sport" of hunting ostriches. In the barren wastes of Africa, and also of Asia, the traveller, as he journeys wearily onward, meeting with but stunted herbage and no water, sees from afar something that alarms him. It looks like a body of horsemen scouring the desert, and, as he fears, bent on plunder. There is no way of escape, and as he looks hither and thither the dreaded object approaches. Then his heart beats more freely, and his spirits revive. The band of horsemen, as he supposed it to be, turns out to be birds. And he is not the first traveller by any means who has made the mistake, and imagined the ostrich to be a man on horsback.

In the first place, the ostrich is quite as tall, and as he runs swiftly along there is nothing at a distance that he more resembles. He always feeds in a flock, and the barren wastes have been his home from time immemorial. He eats grass, and grain when he can get it, and does not seem to care for water. There are people who have said that the ostrich never drinks.

Breakfast of Stones and Leather.

However that may be, his appetite is the most curious part of him. He will swallow almost anything he can pick up, and you might wonder where he did pick up the things that have been found in his stomach, were it not for the caravans that now and then come across the desert. Pieces of leather, nails, lumps of brass or iron, to say nothing of stones, all go down his throat with ease.

He has a huge crop, and then a great strong gizzard. And besides these, he has a cavity that might be called a third stomach. So he is well provided. Of course, strong as his digestion may be, he cannot digest either nails or stones; and some people explain this by saying that his great crop wants so much to fill it, that he is obliged to put in all he can get. And others say that the stones and brass and leather help him to digest his other food, in the same way that grit or gravel helps our poultry at home.

The next curious thing about the ostrich is the pair of wings that nature has given him. The wing is nature's machine by which the bird can support itself in the air, and dart or sail through it as we may see every day. But in some birds the wing fails of this purpose, and is of no use at all to fly with. There are two reasons why the wings of the ostrich cannot bear him into the air. They are very small to begin with, and his great body is too heavy to be raised by such means. And besides, the feathers of the wings are different from those of other birds.

Look how firm and compact is the wing of the swallow or the rook. The feathers fit close together, and the little plumes on each feather hook into each other by those exquisite little catches that are among the marvels of nature. If you pass your finger over the wing it feels like one smooth surface. But in the wing of the ostrich the little plumes are loose, and float lightly about. The ostrich does not use his wings to fly with, though he spreads them out as he runs.

The Flying Camel.

He is in many respects so like an animal, that he forms almost a link between the animals and the birds. Indeed he is so like the camel that he is called the camel-bird. His foot resembles the hoof of the camel. It has only two toes, and both point forward ; and the first is longer than the second, and ends in a thick hoof-like claw. And the habits of the ostrich resemble those of the camel ; they both live in the sandy desert, and are able to go a very long time without drinking. The ostrich does not make any nest, but merely scoops out a hole in the sand. When the proper season comes, the mother ostrich begins to lay her eggs ; she lays about a dozen, and they are very large, and of a dirty white color. In the day-time she leaves them under the burning rays of the sun ; but when the night comes, and the air is cooler, she broods over them.

The natives of the country go out looking for the eggs of the ostrich. One monster egg has in it as much as thirty of our hen's eggs, and is considered quite dainty. But they are very careful how they set about the task of robbing the nest. They choose the time when the mother ostrich is away, and then they take a long stick and push the eggs out of the hole. If they touched any of them with their fingers, the ostrich would find it out in a minute, and go into a great rage. She would break all the eggs that were left with her hoof-like feet, and never lay in that place again. Sometimes a number of mother ostriches will lay their eggs in the same nest.

In some parts of Africa there are tribes of men who eat ostriches, not from gluttony, but because they can get very little else. They keep them as we do cattle, and make them quite tame. The ostrich is by nature gentle, though it is so large, and soon makes himself contented near the dwelling of his master. Sometimes his master rides upon him, and takes a journey.

The beautiful feathers of the ostrich are so admired, that great pains and trouble are taken to procure them. The Arab comes with his swift horse in search of the ostriches. A flock of them are quietly feeding together on the plain. If it is mid-day, they strut about, flapping their wings as if for coolness. When they perceive the enemy they begin to run, at first gently, for he keeps at a distance, and does not wish to alarm them more than he can help. The wings of the bird keep working like two sails, and he gets over the ground so fast that he would soon be out of sight if he ran in a straight line. But he is so foolish as to keep running from one side to the other. The hunter, meanwhile, rides straight on, and when his horse is exhausted, another hunter takes up the game, and so on, allowing the poor bird no rest. Sometimes, in a fit of despair, he hides his head in the sand.

Another method adopted by the ostrich hunter is to disguise himself in the skin of one of these birds, and, armed with his bow and poisoned arrows, stalk about the plain imitating the gait and motions of the ostrich. Moffat thus describes a hunt of this kind:

A kind of flat double cushion is stuffed with straw and formed something like a saddle. All except the under part of this is covered over with feathers, attached to small pegs, and made so as to resemble the bird. The head and neck of an ostrich are stuffed and a rod introduced, and the Bushman intending to attack game whitens his legs with any substance he can get. He places the feathered saddle on his shoulders, takes the bottom part of the neck in his right hand, and his bow and poisoned arrows in his left. Such as the writer has seen were the most perfect mimics of the ostrich, and at a few hundreds yards' distance it is not possible for the eye to detect the fraud. This human bird appears to be picking away at the verdure, turning the head as if keeping a sharp lookout ; shakes his feathers, now walks and then trots, till he gets within bow-shot, and when the flock runs from one receiving an arrow he runs too. The male ostriches will, on some occasions, give chase to the strange bird, when he tries to elude them in a way to prevent them catching his scent; for when once they do the spell is broken. Should one happen to get too near in pursuit, he has only to run to windward, or throw off his saddle, to avoid a stroke from a wing that would lay him prostrate.

The Arabs of North Africa puruse the ostrich on horseback ; not at a dash, however—one exciting run and victory decided but in a deliberate and business-like way. A flock having been sighted, the Arabs put their steeds in motion, and hold them at sufficient speed to keep in sight the fluttering army in advance. When the evening comes, the Arab pickets his horse and rests for the night, and his tired game, finding it is no longer pursued, sinks to the earth and rests too. Next morning the chase is commenced, the clicking of hoofs rouses the still weary bird, and once more he braces his limbs and pursues his hopeless flight. So the game continues, till, tired to death, and with drooping and bedraggled wings, the poor ostrich comes to a dead halt, and the gallant Arab hunter safely approaches and cuts its throat.

The Blow that Ends the Chase.

Toward the approach of the rainy season, when the days are intolerably hot and sultry, the ostrich may easily be ridden down by a single horseman. At the above-mentioned period the protracted drought tells even on this invulnerable bird, and he may be seen standing in a stupefied manner with his wings outspread and his beak wide open. Under such circumstances he offers but little resistance, and though for a few moments he may make hard running, his speed is not enduring ; and presently he is again stock-still and stupidly agape, waiting for the hunter to knock him on the head with his "shambok," or knobby stick.

Our illustration depicts a chase of an ostrich described by Baldwin. Andersson relates that in certain parts of Southern Africa the ostrich is run down on foot. "I have myself seen the Bushmen accomplish this exploit on the shores of Lake Ngami. They usually surround a whole troop, and with shouts and yells chase the terrified birds into the water, where they are, of course, speedily killed." Harris, on one occasion, fell in with a party of caravans chasing an ostrich on foot, and, when they got close enough, "shying" after the fleeing bird, their clubs striking the bird's legs and eventually laming him. "When the ostrich is slain," says the last-mentioned authority, "the throat is opened and a ligature passed below the incision. Several hunters then raise the bird by the head and feet, and shake and drag him about until they obtain from the aperture nearly twenty pounds of a substance of mingled blood and fat, of the consistence of coagulated oil, which under the name of 'manteque' is employed in the preparation of dishes and the cure of various maladies."

Some African tribes take the ostrich in snares, similar to those used in the capture of the smaller species of antelope. A long cord having at the end a noose is tied to a sapling, which is bent down, and the noose pinned to the ground in such a manner that when a bird treads within it the sapling springs back by its own natural elasticity, suspending the bird in the air, only to be released from its sufferings by death. Others again are said to employ ostrich feather parasols, or rather massy plumes—such as adorn our hearses—while hunting wild animals of every description. Thus in case of a wounded beast charging a man, the latter, just at the moment he is about to be seized, whips the big plume off his head, and thrusting the spike to which the feathers are bound into the ground, slips off. While the furious animal vents his rage on the nodding feathers, the wild hunter steals to its rear and transfixes it with his weapon.

Fair Play and no Favor

In hunting the ostrich the mode most favored by sportsmen is to lie in wait at the margins of pools and springs where the birds come to drink. They swallow the water deliberately, and by a succession of gulps. While staying at Elephant Fountain, Andersson shot eight within a very short period. "Lying in wait," however, and taking advantage of your game from behind a wall or hedge, is by no means as a rule a favorite system with the hunter. If an animal has "fight" in it, nothing gives the true sportsman greater pleasure than for it to demonstrate the same to the fullest extent—sharp steel against talons just as sharp and terrible, swift bullets against swift and sudden springs and bounds and death-dealing fangs. Should the animal chased be dependent on its fleetness for safety, again the true sportsman would meet with its own weapons, and stake bit and spur on the issue of the chase.

Andersson relates the particulars of a chase after young ostriches by himself and a friend, and which is none the less interesting that it bears witness to the tender solicitude of the ostrich for its progeny. "While on the road between the Bay and Schepmansdorf we discovered a male and female ostrich, with a brood of young ones about the size of ordinary barn-door fowls. This was a sight we had long been looking for, as Galton had been requested by Professor Owen to procure a few craniums of the young of this bird. Accordingly we dismounted from our oxen and gave chase, which proved of no ordinary interest.

Cunning Dodge to Save the Little Ones

The moment the parent-birds became aware of our intention they set off at full speed, the female leading the way, the young following in her wake, and the male, though at some little distance, bringing up the rear of the family party. It was very touching to observe the anxiety the old birds evinced for the safety of their young. Finding that we were quickly gaining upon them, the male at once slackened his pace and diverged somewhat from his course ; but seeing that we were not to be diverted from our purpose, he again increased his speed, and with wings drooping so as almost to touch the ground he hovered round us, now in wide circles and then decreasing the circumference till he came almost within pistol shot, when he threw himself abruptly on the ground and struggled desperately to regain his legs, as it appeared, like a bird that is badly wounded.

Having previously fired at him several times, I really thought he was disabled, and made quickly toward him ; but this was



AN EXCITING CHASE.

only a dodge on his part ; for on my nearer approach he slowly arose, and began to run in an opposite direction to that of the female, which by this time was considerably ahead with her charge. After about an hour's severe chase, however, we secured nine of the brood, and though it consisted of about double that number, we found it necessary to be contented with what we had bagged.

SUBMIT TO NO MASTER! BUT SUBMIT TO US!

We are always looking for content for our magazine. Two points to keep in mind before submitting: we publish under Creative Commons licensing (see below), and we compensate you no more than we compensate ourselves (which is to say, you will receive no money for your work). We apply our issue's theme lightly, and non-themed work is accepted as well. The theme for next issue is "A Journal of Misapplied Technology" and the deadline for submissions is April 15th, 2007.

FICTION: We appreciate well-written, grammatically consistent fiction. Certainly, we are suckers for 19th century prose styles, but we do not limit ourselves to this. We are more interested in representing the underclasses, the exploited, rather than the exploiters. We have no interest in misogynistic or racist work. We will work with fiction of nearly any length, although works longer than about 5-6 thousand words will probably be split up over multiple issues. We have volunteer fiction editors who, if you would like, can provide feedback on your work; other than this, we will only edit lightly and will always check with you before any changes are made. Submissions can be in .rtf or .doc format attached to email.

ILLUSTRATION: We are constrained to purely black & white illustration by our method of printing. That said, we are excited to work with illustrators. Ideally, you will contact us, and we will send you a list of articles, stories, etc. that are in need of illustration. Any submissions need to be of high resolution (300dpi or higher), and we are quite fond of the .TIFF format. This said, contact us before sending any file over 500k.

How-tos: We are always looking for people who have mad scientist skills to share. We are interested in nearly every form of DIY, although engineering, crafts and fashion are particularly dear to us. We can help adapt things to print format, if you need.

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REVIEWS: We are interested in beginning to run book, movie, zine, music, etc. reviews. Contact us about where to submit materials.

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OTHER: Surprise us! We're nicer people than we sound like.

collective@steampunkmagazine.com www.steampunkmagazine.com

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Contributing Editors:

Juli(A) Kate Khatib Margaret P. Killjoy

Contributing Artists:

Ben Anaman Libby Bulloff Ika Nick Kole Robin Savage Thomas Truax Magdalene Veen Tim Wilson

Contributing Writers:

The Catastrophone Orchestra and Arts Collective (NYC) SteamPunk Magazine Collective Libby Bulloff G. D. Falksen Cory Gross J. T. Hand Margaret P. Killjoy

Technical Consultant: Jake von Slatt

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