STEAMPUNK MAGAZINE

our lives as fantastic as any fiction!

[ LIFESTYLE, MAD SCIENCE,
  THEORY & FICTION ]

TSA

please remove all metal items from your person
One thing I have faithfully observed and noted about punks: they’re all legends, each and every last one of them, in one circle or another. Even if you never see them in the elements of their renown, even in a mere courtesy-handshake between friends of friends in a parking lot, you cannot help but feel an immortal vibrancy, a comic-book kind of costumed exuberance like that parking lot is host to a historic summit or a scene in ten thousand movies we’re living right now...

Inevitably I reach the understanding that this word ‘punk’ does not mean anything tangible like ‘tree’ or ‘car.’ Rather, punk is like a flag; an open symbol, it only means what people believe it means.

—Michael Muhammad Knight,

The Taqwacores

The cover was illustrated by Claire Hummel
Welcome back, fellow time-travelers, artists, vagrants, engineers, pirates, bookworms, performers, and other such folk! For that is who we are—we are all wearers of multiple hats (see Molly Friedrich's article on how to create your own! ;)). Issue Four of SteamPunk Magazine is a tribute to the multiplicity of our culture. Steampunk is fantasy made real, filtered through the brass sieve of nostalgia, vehemence, curiosity, wonderment, and apprehension.

Our culture is not based only in story—it's about action. Contrary to what we often see on blogs and in forums, steampunk is inherently political. Daring to wear what we want and creating communities in our image is rebellious. Popular or no, steampunk is not commonplace. It is anti-establishment. It is dangerous to pluck our dreams from muddy scribblings and coax them into existence in three dimensions.

Let us not speak only of ages gone by, of retrofutures and fantasy worlds. Let us talk about change in our time. Let us talk about going to protests or shows in our garb and performing on the street to let people know we exist and passing out free food and literature to anyone who might hunger. Let us talk of the environmental impact of mainstream culture's technofetishism and of civil rights. Let us talk about doing great and wondrous things, not just what other people are doing elsewhere. And then let us do. Let us make real what we hallucinate on paper or online.

Sometimes, in our giddiness to participate in community, we forget that steampunk does exist outside of our laptops and personal computers. We waste our nights furiously bantering over theory and semantics when we could be gathering together to create. Not everyone is a maker, but we can certainly be more conscientious consumers. Steampunk is in our coffeehouses and alleys and parks, thriving just as wildly as it might in any internet forum. We must remember that our stories may be told online, but we must take our ideas off the computer screen and into the streets.

Steampunk Magazine would, however, like to offer our readers a chance to gather together in the ether to formulate our futures perfect. Understanding a need for a mechanism that allows friends across continents to share projects and philosophies, we are proud to announce the opening of The Gaslamp Bazaar, which is located at http://www.steampunkmagazine.com/forum. We hope that such a place will encourage activism amongst our ranks and solidify us as a society. Please stop on by! We would love to see what you have been doing.

— Libby Bulloff
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An open letter to Jake von Slatt and Datamancer

Gentlemen,

A hearty congratulations on the attentions paid to you by the press of late. Fear no “selling out,” for all such trends wax and wane, with only the true devotees remaining (witness the continued perpetuation of metalhead culture long after society has considered metal to be dead). Attention from the mainstream will draw more good people (who will linger long after the trendseekers move on) just as well as it will manufacture a cheesy, store-bought version of your trend available to all who wish to buy-in without effort. So now you may play a skateboarding video game if you are too lazy to actually skateboard, and so on.

Yet something disturbs me about this coverage, and I assure you it’s not your fault at all. The media seems to portray steampunk as a trend in prop-making and case-modding. Their reasoning is obvious; this is the most marketable aspect of it and larger society understands nothing that cannot be bought or sold. Of course this has benefitted you in the short term and I think neither of you wish to become wholesale manufacturers of keyboards. Let’s treat it as a fortunate happenstance—for Jake, you seem all too devoted to your various projects to become a full-time propmaker, and Doc, you are hopefully using this as a springboard to pursuing your dreams on the west coast. I am happy for your success and hope you wring as much from the buzz as you can. The media, after all, is trying to wring what they can from you.

So this is what bothers me: Steampunk is not some non-functional ray-gun to be painted and polished and put on a shelf, it is a revolution in personal behavior and industrial design! It means making an actual ray-gun! Or, barring that, a ray-gun case for your TV remote... for are not these objects merely props in a larger lifestyle? If we are making our computers look old-fashioned, isn’t it just so they match the rest of our house? Isn’t someone who collects skateboard decks and hangs them on the wall a fan of skateboarding, rather than a skater?

I know already that both of you feel the same way about Steampunk. You’ve both worked hard to emphasize that the product is not the point. We are all three, after all, merely at the right place and time. None of us can make anything that is not handcrafted. Still, I have a friend who is a maker of very fine, very expensive, and very labour-intensive wooden clamps which he sells to Home Depot; he has recently lost that client to someone who is making the same product with slave labor in China.

And now I will tell two stories:

I have long been struggling with the balance of technophobia and technophilia in Steampunk. I like to say that Steampunks are far from Luddites, but appear so, where in fact we are obsessed with technology but we are “techno-suspicious”. I was discussing this suspicion with Guru Stu, trying to pin its specifics down, and he told me a story: After Hoot Gibson’s NASA astronaut career was over, he became the CEO and head test pilot for Benson Space Company, a fledgling private-rocketeering firm. As the company

comic by Doctor Geof
started to design private spacecraft, he asked for the unthinkable: Spaceships that were user-serviceable. He'd been in space, risked his life, and he wanted future astronauts to be able to pull off a panel and fix whatever was going wrong. This is, by modern design standards, ridiculous—but it's what saved the Apollo 13 mission, a mission planned and built by the slide rule instead of the computer simulation. Unfortunately, however, the era of the shade-tree mechanic is long gone and you cannot even fix a toaster anymore. You just throw it out and buy another one. Mass Consumerism (which I trace back to/blame on the “wonderous conveniences of the future” from the 1893 Columbian Exposition, the tipping point when Consumerism began) has bred a generation unable to fix any appliance or tool they own. Conversely, it has often been pointed out that 1900 or so was the last point at which a high school graduate could grasp the basic concepts behind all human knowledge.

The second story: When LeChat Noir (who has synthesized old and new in his craft in a way I've seen no other steampunk builder do, starting with a base of blacksmithing and then developing ways of making a plasma cutter produce work that looks like it was cast) was building his “Contraption”, he was pulling apart an old tobacco setter, and he wrote:

“When I broke apart the guides that held the axles for the discs, I found that they contained wood bearings. I suspect worn-out rabbit bearings were replaced at some time by an industrious farmer who needed to get this thing going again. They were well made, as if turned on a lathe and were built as a two piece assembly complete with holes for oil access. Its weird, but I swear I feel echoes of the past in stuff like this. Like the vibrations of the lives that counted on this piece of equipment were recorded in the grooves worn into that wood like a groove in a record.”

When I heard the story of Hoot and his user-serviceable spacecraft, it dinged the dusty memory of LeChat’s wooden babbits, and that’s when I realized why I don’t like modern technology: no user serviceability! Just like the label says: “No User Serviceable Parts Inside”.

Those who’ve circuit bent have pulled out a toy’s circuit board and found resistors and circuits they could mess with and replace, but know of the black synthesizer dot and its impenetrability. User Serviceability can involve modern technology by being modular, so at least the unserviceable part can be yanked out and replaced when neccessary. Perhaps this is all obvious to you both. But to me, it finally provided me with a guideline for allowing technology into my life: I’ll use any machine that I can fix!

But I’m no re-creationist living in dreams of the past. It’s not that I want to go back to the 1800s, it’s that I’ve spent too much time in the third world to not realize that now is the 1800s, and you can be plunged into that level of survival at any time. While an absolute collapse of society is unlikely (an I’m not sure I’d want to live long afterwards), there are plenty of likely scenarios for temporary social collapse, such as the aftermath of Katrina. Those possibilities are much more possible and realistic than some end-times scenario. To me, living a steampunk self-reliant life of minimal technology is about preparation for those possibilities. I don't want to survive an earthquake only to die because I don't know how to grow corn, or fix a generator, or suture. And thus I only involve user-serviceable technologies in my life.

See how drastically this interpretation of our lifestyle differs from the media's fixation on the casemod entrepreneur. Of course there is room in our world for both. I only hope that your own creations remain accessible, and I have faith that they will. Let's use this peak of popularity to bend the world just a little bit towards our own vision.

Fondly,
Your Servant,
Johnny H. Payphone

**Correction:**

In SteamPunk Magazine #2, we ran an article that stated that the film The Prestige is vastly superior to the film The Illusionist. This is simply not the case, and we at SteamPunk Magazine greatly regret the error.
In a sense, Isabelle Eberhardt was born on the run. Her father, Alexandre Trophimowsky, was a Russian Orthodox priest who converted to nihilism and left the church to be with a married woman. Isabelle’s mother, Nathalie Moerder, was that married woman, and she ran off with Alexandre with her two children in tow and soon gave birth to the illegitimate Isabelle.

Isabelle was raised by the stern hand of her father, who provided her with an extensive education. He taught her Greek, Russian, and Latin, and later, at her insistence, Arabic. Isabelle worked hard alongside her brother, doing “men’s work” and often wearing trousers. In the late 19th century, this was not the accepted way for a young woman to live, but then, Isabelle was not being prepared to live an ordinary life. It was quite possibly this unconventional upbringing that gave Isabelle the fortitude to embark on the epic adventures of her life. Vava (uncle), as she called her father, left a bitter taste with Isabelle and she longed to leave his brutal regiment behind.

Throughout her childhood, her closest friend was her half-brother Augustin. They shared everything, including the dream of total liberty. Her love for her brother was the first of Isabelle’s bouts of mad love, a love completely outside the bounds of convention—though it would not be her last. It is lost to history what the exact nature of their relationship was, but she wrote often of it. Augustin and Isabelle longed for a life outside the walls of the compound where they lived, and spent much of their time exploring the urban wilds of Geneva, entangling themselves in unknowable adventures.

What is known, however, is that the Swiss authorities were keeping tabs on the family, and eventually Augustin fell into trouble. It may have been his anarchist affiliations, his gambling debts, or his uncontrolled love of opium that led him to desperate measures, but he felt his only escape was to join the French Foreign Legion. Later, he would marry a woman that Isabelle found to be intolerably boring and sensible. As Augustin drifted into predictable mediocrity, Isabelle, devastated and betrayed, hatched plans of her own.
...but the moment of danger

II

Springtime, 1897. At the age of nineteen, Isabelle departed for Algeria, having convinced her ailing mother to join her. Shortly after arriving in the city of Bône [now known as Annaba], Isabelle made her preferences clear by taking up residence in the loud and raucous Arab quarter. This rejection of the French quarter was her first affront on colonial sensibilities, but it was certainly not her last.

Both Isabelle and her mother officially converted to Islam shortly after their arrival in Africa. Her mother, however, soon died and was buried on a hillside. At last, Isabelle was alone and adrift. Although her mother had married into the noble class, Isabelle’s illegitimacy made inheritance impossible, and she was destined to a life of poverty.

Vava had heard of his wife’s failing health and set out across the sea, only to find her dead and their child in suicidal despair. Isabelle, deep in grief, told her father of her desire to die. Vava, with his typically chill calculations, handed Isabelle his revolver.

Perhaps he knew that Isabelle’s will to live was too strong, and that by pressing his gun into her hand he would force her to confront the pain of a life lived fiercely. Isabelle, having long since determined to leave her life in the hands of fate, chose not to pull the trigger.

III

Isabelle threw herself into an abyss, but not that of suicide. Instead, she descended into a debauchery previously unimaginable for such a young woman. Since it was unacceptable for a young woman of European descent to walk the streets alone in Bône, Isabelle became a man. She took to wandering the cacophonous Arab quarters in the long white burnous of traditional Arab men, having realized an identity for herself that allowed her to pursue the boundaries of the colonizing culture by living amongst, rather than above, the Arabs.

This was a lonely path, of course, and being neither male nor female and neither Arab nor French left Isabelle out of all communities. This was a road that Isabelle envisioned herself to be on, in one way or the other, for many years. She wrote time and again of the long white road, the lane that stretched out from Villa Neuve. It was a road to autonomy and freedom for her in her youth, but it later came to represent the path of the isolated wanderer.

In Bône, Isabelle could drink and smoke her way into a stupor, and find an abundance of lovers, but that was not the complete autonomy she longed for and wrote of. There were other roads for her to take.

Isabelle embraced sufism, a mystical and largely tolerant form of Islam with an emphasis on personal experience of the divine. Though profoundly devout, Isabelle wrote very little about her spiritual practices. She prayed daily and attended mosque. In time, she was initiated into the ancient sçfi order The Qadiriyyah. Associating with an order was not an uncommon thing among the Algerians at the time, and although the affiliation would prove useful in her years of wandering, it also predicated a cataclysmic twist of fate.

IV

It was in the endless sea of sand that Isabelle found the autonomy and freedom she had always dreamed of. She took on the persona of a Tunisian student, and traveled alone on horseback. Although not everyone she met believed she was a young man, or a “Tunisian student,” there was a tolerance for difference that did not abide in Western Europe at the time. For years she wandered, exploring the deserts she loved. Sometimes it was just her and her horse, other times she joined long winding streams of camels driven by nomads through the dunes. She visited lands and met peoples that no other European of her time had the courage or desire to seek out—except to subject or exploit.

Her initiation into the Qadiriyyah had become a scandal in the eyes of the French authorities, who suspected her of inciting the natives to revolt against the colonial occupation—as members of that order were prone to doing. With these accusations, it was a challenge simply to make ends meet.

One noonday, sun high above her, Isabelle sat down in a remote village to translate a local man’s letter. While deep in translation, a man rushed her from behind, sword held high
and glinting. He was a poor man from a rival sufi sect. Perhaps he was manipulated into the act by the French authorities, perhaps it was merely their opposing sect loyalties. By chance, his sword hit an unseen clothesline directly above Isabelle’s head, and his sword missed her skull and tore into her shoulder instead.

Later, Isabelle successfully advocated for her would-be assassin in court, helping him to escape the death penalty.

Before and after this encounter, Isabelle wrote manically, at times making a living as a journalist, and hoping to become a published author. She reported, for European audiences, on North Africa in the throes of colonial conflicts. Much of her vast collection of writing chronicles her explorations and wanderings through the vast Sahara, living among nomads and common people. Her journeys were both physical and philosophical, and she recorded with as much detail the cultural traits of various tribes as she did her own conclusions on what it meant to be a risk taker in this world:

“I wasn’t made to whirl through intrigues wearing satin blinders. I didn’t construct for myself an ideal: I went for discovery. I’m quite aware that this way of life is dangerous, but the moment of danger is also the moment of hope. Besides, I have been penetrated by this idea: that one can never fall lower than oneself. When my heart has suffered, then it has begun to live. Many times on the paths of my errand, I asked myself where I was going, and I’ve come to understand among ordinary folk and with the nomads, that I was climbing back to the sources of life, that I was accomplishing a voyage into the depths of my humanity."

Reflections in a courtyard, diary entry.

One starry night at an oasis, as she was sleeping alone under the velvet black desert sky, Isabelle was awakened. Her rouser was Slimane Ehnni, a native Algerian soldier. The two quickly fell into mad love.

Eventually, the French authorities succeeded in deporting Isabelle from the colonies, and it was only by way of marriage to Slimane that she managed to return to Africa.

Never content to be settled, Isabelle departed her husband for months at a time to wander the deserts alone. Their once mad love turned into an enduring dedication, one that left her freedom wholly intact.

Isabelle’s life was marked by an unwavering spirit of adventure and wanderlust. In her endless self-evaluations, recorded in her diary, she constantly challenged herself to push further into spiritual realms, deeper into the desert, to be more self-sufficient, to be more free. She was hard on herself in a world that was hard on her, and Isabelle battled addiction and illness. It’s likely that she suffered from syphilis in addition to the injuries she sustained during the assassination attempt.

After a particularly difficult bout of illness, Isabelle planned a reunion with her lover. They had been apart for a long time, and she missed him sorely. Slimane had found a small mud hut for them in the Algerian town of Ain Sefra, near the Moroccan border, and it was there that the lovers were reunited. They spent one last night together, when their home—and Isabelle’s life—was destroyed by a flash flood. As strangely as her life had begun, so it ended: Isabelle Eberhardt drowned in the desert at age 27. Her body was found crushed under a beam and buried in the mud. The year was 1904.

“A while ago the enlightened Aissawas were singing their Asiatic ballads, celebrating the blessedness of non-existence. And now the black Africans are singing, unthinkingly, a great hymn of love to eternal fecundity. As for me, I know music stranger and stronger, music that would bleed the heart into silence, songs that lips have murmured, absent lips that will drink other breath than mine, that will breathe another soul than mine, because my soul could not give itself, because it was not in me but in eternal things, and I possess it finally only in the vast, the divine solitude of all my being offered to the southern night.

In the morning, the west wind suddenly arrived. This wind, which could be seen coming, raised spirals of dust like tall plumes of dark smoke. It advanced on the calmness of the air, with great sighs that soon became howls; I lent it living accents, I felt myself carried up in the huge embrace of monstrous wings rushing to destroy everything. And the sand fell upon the terraces with the incessant small sound of a shower.”

Isabelle embraced a strange dream of freedom, insisting on living life on her terms alone. She overflowed with creativity, debauchery, loneliness, and mad love. Eberhardt left us the writings of a vagabond, a wanderlust rebel, but at the same time she chronicled a deeply examined life. Her journey was based on an unwavering dedication to total self-liberation. While she accepted the suffering and loneliness this long white road brought, she threw herself wholly into the passionate excess it afforded her.

...but the moment of danger is also the moment of hope.
The Good Doctor is putting about in his workroom when Igor dashes in.

“Doctor!” gasps Igor.

“What is it, Igor?”

“It’s the peasants!” Igor gibbers, gesticulating in the general direction of the front of the castle and the road leading up from the village below. “The peasants are revolting!”

“And what else would the peasants be if not revolting?”

“Doctor, unless you think it likely that the village populace are heading up the road en masse and prepared for a nocturnal hay harvest, then I suggest we quickly pack your work and head out the back way!”

“What? Oh, it’s another ‘torches and pitchfork’ parade, is it? Fear not, I have a plan!”

“I’ll bring the carriage around back!”

“Not necessary, Igor! First, switch the nameplates on two rooms: swap “Conservatory” for “Laboratory” and we’re halfway there. Then, go down to the storeroom and return with whatever old jars and vials you may find handy, and bring up the ‘Jacob’s Ladder’ apparatus.”

“Doctor, what are you talking about?”

“The good people of ‘Shtuppstein’ are looking to inspect the laboratory of a ‘mad scientist’. We can help them find it by displaying a Jacob’s Ladder, as I believe that few Shtuppsteiners could read the nameplates, could they? They’ll sniff around in the ‘lab’, look at some vials of colored water, pet that basket of kittens we rescued last week, and find nothing to shock their delicate peasant sensibilities... provided they don’t get touchy-feely with the Ladder, that is. In the end they’ll be apologizing for their intrusion and then all go back home, and we can get back to our more sinister work... in peace!

BUILD YOURSELF A JACOB’S LADDER

WITHOUT BURNING YOUR HOUSE DOWN IN THE PROCESS

(one would hope)

written and diagrammed by Prof. Offlogic
illustration by Molly Crabapple

A “Jacob’s Ladder” is essentially a set of electrodes with an electric arc cycling from the bottom to the top. Since electric current is lazy, the arc will start at the point of least resistance, near the bottom where the electrodes are closest. Once the arc starts, the air conducting the arc is both ionized and heated by the current. Ionized air is more conductive than non-ionized air, and heated air tends to rise, so the arc will rise with it. The electrodes slope away from each other, so eventually the gap is too wide to support the arc. It re-forms at the bottom again, where the going is easier, and the cycle repeats. It is truly a wonder to behold, like watching the Devil’s own yo-yo!

Although a Ladder serves no direct scientific purpose, having one is a requirement for recognition as a “mad scientist” (the preferred term is “ethically-undaunted science worker”) and it is the internationally recognized symbol of “forbidden science in progress.” Having one in operation greatly facilitates engaging the services of reliable resurrectionists, infernal device contractors, and members of the International Congress of Hunchbacked Henchmen.

YOU ARE WARNED! YOU ARE WARNED! YOU ARE WARNED!

This project involves high voltage and AC line power. This how-to isn’t intended to be a college course so beware! These directions do cover making two types of Ladders. Be careful, and stay safe by following some minimal precautions:

— Never work on any mains-powered device with power applied.
— Make solid electrical connections and insulate them.
— It is a good idea to work with a friend.
— Evaluate both your level of expertise and your karmic burden before attempting this or any other electrical project.
— If you have any doubts at all regarding safety stop immediately and get help from a technical expert.

Remember these three primary points when building or operating a Jacob’s Ladder:

— High voltage really hurts! Think ‘bug zapper’, and remember that you are the bug! Probably not enough current to stop your heart outright, but the arc will definitely burn you and make your thrash in an uncoordinated way, subjecting you to other injuries as you collide with walls, floor, other equipment, and people.
— High voltage burns and ignites stuff! This is a big spark plug, so do not power it up around flammable vapors (paint fumes, natural gas, anything that smells like airplane cement, nail polish remover, gasoline, spirits, etc).
— High voltage kills electronics! Many modern appliances, from coffee makers to cellular phones to I-pods, contain delicate circuitry, and one taste of the Ladder (even filtered through your body), will like as not render them “food for the land-fill.”
The easiest, most basic system requires only a neon sign transformer and some insulated mounting blocks. It’s so easy it’s almost cheating, but it is a bit bulky.

eBay has a couple of neon sign supply sellers at any given time, but you will need a “neon sign transformer” not a “neon sign power supply.” If it says “UL-2161” (a safety requirement that, among other things, keeps it from making an arc) it is of no use for Ladder makers.

I managed to score three Transco #4B15N3-02 transformers weighing over 20 pounds each on eBay. Caveat emptor: “removed from working equipment” doesn’t mean they were careful when doing it, and they all had damaged insulators. It was nothing a couple of 2 inch PVC couplers filled with Bondo couldn’t fix (a whole other article in itself).

Next you’ll need some electrodes and an insulating base to hold them. I used ceiling tile hanger wire for the electrodes. For the base, I was lucky enough to have a weird looking chunk of cast urethane lying around, but a block of wood will work nicely (dry wood, varnished is best). Attach the electrodes to the base in a manner that makes it easy to adjust them for maximum effect (with the power off, remember!). Connect the output leads from the transformer to opposite electrodes using high-voltage wire if you have any; I didn’t, so I made due by keeping the output leads short, separated from all other conductive objects, and clear of probing fingers.

For proper operation, a Ladder requires a location that is level, dry, and sheltered from drafts or breezes. Level because the electrodes need to be where the arc wants to go (up), dry to keep you from frying yourself or other, and sheltered because drafts and breezes will try to carry the hot gasses in the arc away, spoiling your fun. You might keep kids and pets out of the area as well, since they tend to lunge at things.

When you switch on the power to the transformer for the first time, one of the following will likely happen:

— No arc at all.
— A continuous arc that just stays put between the electrodes.

Remember how the electrode mounting needed to be easily adjustable? Here’s where that part comes in. You will need to iteratively:

— Remove power to the transformer.
— Adjust the distance/angle between the electrodes.
— Reapply power and observe outcome of adjustment.
— Repeat until the desired results are achieved.

To deal with the first problem, a rule of thumb is that electricity will arc about 1/10th of an inch for every 1100 volts. For my transformer, rated at 12,500-16,000 volts, I positioned the electrodes just a bit further than the arc would theoretically jump, by drilling two holes about 2 inches apart, attached the wires at the base of each electrode, then bent the electrodes in to form a “wasp-waist” configuration. I dealt with the second problem by adjusting the angle of the electrodes above the “wasp-waist” more and more toward the vertical until the spark began to rise up between the electrodes.

My neon transformer Ladder throws off a very noisy 3-5 inch arc at the top of a pair of 4 foot electrodes. I christened it “Herr Baron” (it just seemed fitting).

Unfortunately Herr Baron is just too much power for use inside. For that niche, we can turn to the second, more accessible design...

IT CAME FROM THE SALVAGE YARD... AND THE HARDWARE STORE (FACING PAGE)

I came across a very simple means of producing a Jacob’s Ladder, built around an incandescent lamp dimmer (600 Watt, like you’d replace a lightswitch with) and an automotive ignition coil (mine was from a 1990 Ford Escort, your mileage may vary). The dimmer is wired to an AC cord in a manner identical to its normal use. The output of the dimmer is connected to the ignition coil through a capacitor (details below). The capacitor blocks direct current, but allows pulses from the dimmer through, giving little kicks to the primary of the ignition coil, which multiplies the primary voltage hundreds of times and puts it out to the electrodes.

The capacitor needs to be at least 1uF with a working voltage of at least 220 VAC. The capacitor must be non-polar, rated for an AC voltage of at least double the AC voltage in your area (tripled even better). Since I’m in the US of A, standard mains power is 120 VAC.
Now, you can spend $50 on a big motor start capacitor, or $10 ordering a 4.7uF/600VAC poly cap from an electronics distributor, but if you are lucky enough to have a real hardware store (not any kind of “depot”, but a dusty old independent store) in your area, you might be lucky enough to find “ceiling fan speed control capacitors”. I think mine cost $6, cash and carry.

Ceiling fan caps are usually two capacitors in one, with one input wire shared between a 1.5uF and a 3uF capacitor, each with separate output wires. These are perfect because you can connect the two output wires together to make a 4.5uF capacitor rated at 250VAC.

I built this smaller Ladder inside some 4” diameter PVC drain pipe.

Most electrical connections were made using “peanuts” (or “wire nuts”), though the Ford Escort ignition coil did require some crimp-on connectors to make connections. The high-voltage output from the ignition coil was a socket close to 1/4 inch in diameter, so I coiled a bare copper wire around a #10 machine screw and forced it in. The other end of the high voltage lead and a connection to safety ground were attached to two “banana plug” terminals I’d mounted through the square wrench-end of a 4 inch PVC clean-out plug cemented inside a 4 inch-to-3.5 inch PVC reducer. The smaller end of the reducer fits nicely inside the 4 inch PVC body of the Ladder.

For added protection against internal arcing I enclosed the high voltage lead in a good packing of “Bondo” glass-filled body putty, which also anchored the ignition coil to the underside of the clean-out plug.

Once the base assembly was complete, I made electrodes with 3/32 inch bare brass welding rods. A 90 degree bend about an inch from the end of each of them allowed them to stand upright after being screwed down into the banana plug terminals. A 4 inch diameter glass candle chimney picked up from a resale shop for $1 completed the ensemble.

The completed assembly was finished in hammered bronze using Rustoleum “Hammered Paint for Plastic”.

**REFERENCES**

Sam Barros (the mac daddy of high voltage) self-resonant flyback driver (and lots of cool other stuff): http://www.powerlabs.org/flybackdriver.htm

Don Klipstein has one of the most comprehensive collections of high voltage information out there: http://members.misty.com/don/igcoilhv.html

The dimmer/ignition coil idea came from Snock’s High Voltage Page: http://www.geocities.com/capecanaveral/lab/5322/simpleign.htm

**OTHER OPTIONS**

**IT IS POSSIBLE TO CONSTRUCT A SMALL LADDER POWERED by a “flyback transformer”, but the process is somewhat involved for those not already electronic tinkerers.**

Using the flyback as a source of high voltage makes for a very compact unit, though bulky heat-sinks are required for the driving electronics. Due to the high resonant frequency of a flyback (15–16KHz), I found the audio appeal of these lacking when compared to the 60HZ models... just not enough *crackle* to suit my taste. 🌡️
I do not know if these words will survive—any more than I can be assured of my own survival—but since I find myself with the time and the need to record these final thoughts and confessions, I shall take pen to page and do just so. My name is Philip Pirrip—though that is not the name I was born with it is, nevertheless, my name—and this is the story of my birth, education, and the induction into the Fraternal Order of the Cog that was both my undoing and my salvation.

I was born into the wrong place and—most tragically of all—the wrong time. Somehow, even in my infancy I knew that there was something wrong with this pale, antiseptic world I occupied. According to my mother, my persistent colic could only be calmed by the sound of whirring clockwork held close to my ears. When I became old enough to walk, I set about disassembling whatever devices I could reach to see inside them and investigate their workings. More often than not my efforts were met with disappointment, as the circuity of even our toaster was microscopic. I loved the smell of my uncle's illegal tobacco cigarettes and would follow him around while he smoked—until my mother finally shamed him into quitting in favor of foul marijuana. Who is to know what made me so? Perhaps there is something to reincarnation and I was born with a sentimental soul: one that longs for its past.

It was the books that finally told me who I was. Not long after I'd turned eight, I was bedridden with the enigmatically named chicken pox. My grandfather gave me a few H.G. Wells and Jules Verne paperbacks to pass the time while my Gamestation was being fixed. I remember the crinkle and crunch of cheap yellow paper, the smell of times long gone. It was a revelation for someone who'd until then only read words from a screen. The faded cover boasted a thousand thrills and chills beyond my wildest dreams, and the stories within did not disappoint. Even before I started to read, I knew that I had been given an answer. Though the science described in these stories held little resemblance to the real thing, I was fascinated by the possibilities they offered. It was not merely the applications of technology that awed me—for miraculous devices can be found everywhere in this age—but the romance of discovery and the pleasure of seeing beautifully crafted devices in motion. Gears and cogs and pneumatics and steam made me weak in the knees. Science that was not beautiful did not interest me. I wrapped myself in the novels of Jules Verne, H.G. Wells, Conan Doyle, and Poe; in artists and musicians from the Victorian era. I asked my mother for a Prince Albert frock and took to wearing it regularly. In short, I awoke to nerdhood at an early age.
I graduated high school early and wasted no time in packing for college. I attended MIT with the intention of majoring in AI psychoanalysis like the rest of my class. I drowsed through my first semester of classes much as I had sleepwalked through most of my life: making friends I did not care much for and studying things that only tangentially interested me. Professor Pappas, with his overly enthusiastic lectures on bland, invisible microchips, failed to excite me the way the Verne had. I began to wonder if I should have studied the arts instead.

It was not until I had consigned myself to a second semester of soullessness that I encountered the Order. I was sitting at a table in the quad, drinking my Darjeeling and staving off boredom with a tattered copy of Edward Bellamy’s *Looking Backward*, when a shadow suddenly appeared to block my reading light. Irked at this intrusion of my private space and time, I looked up and the sharp words I had readied dulled on my tongue. The woman who stood over me wore a billowing dress nearly as red as her flaming hair and at least a century out of fashion, with a poesy-weighted tea-hat on her head and a collapsed parasol in her hands. She leaned over—seemingly oblivious to her uncomfortable proximity—and squinted her green eyes at the title of my book.

“I didn’t think anyone read actual books anymore.” She spoke with an elocuted British accent, the sound of which sent a thrill down my spine. It was a businesslike way of speaking, cold and measured—and yet there was a sort of music to it that delighted me. She introduced herself, gloved hand extended, as Estella Haversham, Senior Deacon for the MIT chapter of the Fraternal Order of the Cog. I was nearly too tongue-tied to introduce myself. She was part of a Culture, I realized. There were many such groups on campus, like the Minutemen who patrolled the walks in revolutionary war garb, or the *animorphs* who surgically altered their facial features to resemble those of Japanese cartoon characters. Cultures were frequent targets of ridicule amongst more acceptable members of campus society. I had never heard of the Fraternal Order of the Cog before, however.

“We are a chapter of steampunks,” she explained. “Anarchists, socialists, and other political revolutionaries with a love of true science—the soot-blackened and steam heated kind. We bow to no one but common decency and the laws of the universe, and even these serve us as much as we serve them. We are holding an open demonstration of science outside of Tesla Hall tonight. Attend if you are interested.” And would you believe, unknown reader, that I was?

I saw her again at the demonstration, this time clad in goggles and red leather to protect her from the billowing flames that issued from the thousand-heads of monstrous organ she and her fellow Cogites had built. It was a massive instrument, the size of a van, squirming with brass tubes, each of its iron keys shaped like a different animal, capable of mimicking any music instrument. They played the best of Brahms, Bach, Beethoven, and boogie to a small but enraptured audience. As I danced for the first time in my life, I realized that these people were like me: souls pining for a world denied, singers of a song only they could hear. I made up my mind at that moment to join them. No matter the mockery of my peers. If their dead, grey world was reality, then I wanted no part of it. These were my people. This was my reality.
“What’s wrong, Timmy? You don’t seem to be enjoying your banana nut sundae. What’s on your mind?”

“Mr. Know-it-All, what’s a Culture Terrorist?”

“Why, Timmy, where’d you learn such big words?”

“The newsfeed, sir. And my mama said the other day that she’s scared the Culture Terrorists are going to destroy America. Could that really happen, Mr. Know-it-All?”

“It just might, Timmy, it just might. A Culture Terrorist (or CT) is a kind of person who just isn’t right in the head, the kind of person who’s so twisted that he or she can’t see how wonderful the world is right now. He or she hates our modern life and products, like your Gamestation IX.”

Timmy gasps.

“The CT wants to go back to a time when people were crude and cruel like him. In the old days, terrorists were religious fanatics or communists, but now... Well, now they have all kinds of wacky beliefs!”

“Like what?”

“Like the Furries who took over three floors of the Sears Tower back in 2022.”

Images of men and women in colorful cartoon animal suits using tasers and AK-47’s to herd terrified hostages into an elevator. One fox, with googly blue eyes, has a bomb strapped to his back.

“Or the cross-country bank robbing LARPers in ‘27.”

A snarling elf holds a teller at crossbow point. In the background a twelve-year-old boy in star-covered robes and a fake beard waves his hands and yells nonsense words.

“Wow, Mr. Know-it-All, those terrorists sure are funny!”

“They sure are, Timmy, they sure are. Funny but dangerous. So it’s important that you keep an eye out for people you think might be CTs. If you know someone who collects comic books, dresses up in chain mail, or likes to pretend that he or she lives in any time other than the present, report them to your local CTD unit straight away. Because the next Culture Terrorist might be in your very home. Or yours! Or yours!”


JOINING THE ORDER was a more complicated matter than simply renting an overcoat and showing up to weekly meetings. I was to forego use of all twenty-first century technology. Writing my school papers with an old pen and inkwell was d—n near impossible, but a revelation. Without an AI to organize and compose my thoughts for me, I was forced to think carefully about my ideas and the language that contained them before committing them to paper. My first few efforts were dreadful, but as time passed I learned to write—and think—with
a degree of clarity that I had never been capable of before.

Further rites of passage took the form of assisting in the building of the group’s inventions. I was dubbed an apprentice, and through hard work and initiative I was expected to work my way up to a Journeyman. The Order of the Cog was an anarchist group, however, so though I was considered a junior in my understanding of science, I had no less a voice at our meetings than our own chairperson.

The chairperson of our Order was its founder, Mr. Abel Magwitch: a quiet, kindly old man who, with his long white beard and sad blue eyes, resembled no one so much as Sir Charles Darwin. When he spoke it was with a raspy whisper, the voice of a man who had spent his younger years yelling over the clank of heavy machinery. Mr. Magwitch was a master of mechanical engineering—in his past life he had held an advanced degree in robotics—but he was interested in every aspect of the world and knew something about nearly everything. He was shy and never joined in our raucous revels, but he would often take us aside to offer advise or encouragement of such quality that it was impossible not to admire him as we all did.

Second in experience was Mr. Jaggers, who—with his iron teeth and perpetually soot-blackened features—frankly frightened me. His face was always clenched in a scowl and he spoke to us apprentices as though we were children. But he taught me to smoke a pipe and judge good tobacco, and his understanding of political philosophy was second to none, and in this manner he quickly earned my respect.

Life in the Order was non-stop excitement. I had little time for classes and soon stopped attending altogether. Stella taught me to fire old-fashioned firearms and gave me one of her homemade air-pistols; which were, of course, inspired by those featured in the Sherlock Holmes stories. We raised money by performing in concerts with our steam-powered instruments. We demonstrated the wonders of science to passersby on city streets. We flew over towns in a hot air balloon and dropped pamphlets that decried the government onto the sleeping houses below. I can’t count the hours I spent in the darkness with my fellow Cogites, sipping absinthe and watching old science fiction films projected silently onto the wall with Drummie’s homemade cinematograph. The futures that those movies promised didn’t seem so distant anymore. Watching them, I felt as though I were peering into the true world that this veil of solids only hid. We knew the truth.

When we weren’t doing all these things, we worked on the Order’s master project: the construction of a steam-powered automaton of Mr. Magwitch’s design, inspired by the works of Mr. Lewis Carroll. It was dubbed ‘the Jabberwock.’

The night of the Jabberwock’s celebratory animation, Mr. Magwitch and Mr. Jaggers had an altercation. The exact nature of their furious debate is unknown, as it was held behind closed doors. But we could hear the timbre of their raised voices and made out the occasional non-sequitur through the muffling wall. At the conclusion of their debate, Mr. Magwitch stormed out of the room and the building, his shoes and cane pounding out every step to the doorway.

Our fears could wait for tomorrow. There was science to witness
tonight. Shivering in anticipation, we watched as Mr. Jaggers threw the switch and brought the Jabberwock to screaming life.

COUNTER-TERRORISM DIVISION UNIT #42A
TRANSCRIPT 2/15/37
18:41-18:43

"Damn! The optics went out. What the hell got our hunter-seekers?"
"Looked like a giant steam-powered robot to me, Carl. With scythe-sized claws."
"But where did it come from?"
"Keep in mind that we're dealing with Abel Magwitch here. MIT whiz kid back in the 1990's. Passed on hot fields like String Theory and New Quantum to study antiquated Newtonian physics with a focus on steam-based technologies. Guy puts the 'gee' in 'genius.'"
"First they somehow neutralize the dustcams, now they take out the Hunter-Seekers. What's left?"
"I dunno. Give into their demands? Shut down nanotech research like they ask?"
"Or we could send in everyone. Forget the hostages."
"Some of the most brilliant scientific minds of today are in there, Carl."
"There isn't a single one of them that we won't be able to replace with an AI next year. I'm sick of these freaks popping up every other week, Clyde. Let's just take 'em out. Make the rest of 'em think twice. Let's send in everyone."
"What do you mean by everyone?"
"Come on. You've seen 'The Professional.' What do you think I mean?"

Mr. Magwitch no longer attended Order meetings after that night, but a week later, he asked us all to come for a special lecture at his house. There would be wine and cheese—and food for the mind as well. Naturally, we were all very interested to attend. Everyone was already there when I arrived—with the notable exception of Mr. Jaggers. Mr. Magwitch was a meticulous host and a wide selection of cheeses and wines was spread out for us to sample on his dining table. He took time to speak with each of us, making sure that we were comfortable and well fed. He showed us some of his latest creations: tiny mechanical doves whose clockwork mechanisms doubled as music boxes, exalting the room with beautiful hymns as they flit about.

When he was certain of our elegant sufficiency, he took off his shoes, stood up on a chair and, with a slight cough, begged our attention. Our minds a pleasant buzz from the wine, we gave it gladly. None of us expected him to start his speech the way that he did:

"Pornography," he said. I confess that I may have spat up some of my Shiraz.

Pornography was the credo for the world we lived in now, he explained. Modern humanity's surroundings were a vast buffet of instant gratification for the basest of senses with no real truth or beauty to nourish its greatest parts. We lived in an empty utopia where nearly anything could be obtained with ridiculous ease but nothing could satisfy. Science had brought us one miracle after another, but these miracles had not transformed the world into heaven. Rather, they merely made heaven mundane. Kitchens were laboratories where food could be synthesized and all care or art was excised from cooking. Sexual intercourse mostly occurred in the wireless worlds, in digital love motels where lovers never touched. An endless variety of entertainment was available online for free. Nearly everything was mass-produced by automatons. Fewer people left their homes with every passing improvement to virtual reality. Life itself had become a masturbatory fantasy.

"This world has given us everything," he announced, "and it has destroyed us."

He called for change. Not a return to the past. Science was progress, life was change, to deny these things was to deny reality and embrace madness. Rather, Mr. Magwitch dreamt of another future (a dream that he suspected had brought all of us together), one where humanity was self-reliant and separate from and master of the tools that enhanced him. A future where every man and woman was a scientist, artist, or explorer. And since it seemed that our fellows were too comfortable to change, it was our responsibility to drag them into that future, kicking and screaming if need be.

Of course, this would require our participation in illegal activities that would be judged antisocial and insane by society—as all truly meaningful
activities were—and he understood if we did not wish to participate. He himself would never have suggested this if he did not feel that revolution was necessary. I think he was genuinely surprised by the applause that greeted the conclusion of his speech. I clapped until my hands were red as strawberries. He had described the world as I saw it, had captured the feelings I’d had since I first became aware.

We started picketing the nanotech research lab and sabotaging the local wireless grid. We set up a steam-powered grinder/percolator outside JavaBucks and offered free coffee. We wrote our congressmen and we begged them to reconsider Proposition 444.

And then we moved on to bigger things.

Accessing GonzoFeed™: Your Source of Music, Movies, Pornography, Spirituality, and News Customized to Your Personal Tastes! Reality As You See It!

“The standoff has gone for eighteen hours,” the SimReporter announces [to some eyes it’s a dead ringer for Marilyn Monroe, to others Edward R. Murrow, and for the vast majority, a giant talking penis]. “The last of the hostages was released nearly an hour ago but the terrorists have not evacuated the building. It looks like the CT team has decided to make the first move. They’re sending in a battering-bot to knock down the door… Oh my God!” [This blasphemy is censored for those who have enabled the ‘censorship’ option.]

Hissing and smoking like the devil himself, an iron monster bursts through the barricaded front doors of the laboratory and knocks the heavy battering-bot aside with a disdainful swipe of its massive claws. [Heavy metal music begins to play as] The monster tromps down the steps in tune with the giant key spinning in its back. Trained soldiers back away in terror. They are used to enemies that are functional, who lack imagination and passion. They have never seen something so beautiful and horrible as this Moreauian monstrosity. Twin blue flames burn in the hollows of the monster’s eyes. Its curved claws stretch all the way to the ground, scraping grooves in the stone. It is a marvel of engineering and craftsmanship. It looks almost alive.

A moment later the spell breaks. Their training recalled, the soldiers open fire and their high-powered bullets shred the Jabberwock like paper [on sale at FleurMart now! High-powered acid bullets! Real men only buy bullets from Marksman!] What’s left of the iron behemoth crashes down the stairs, bursting and steaming. The Jabberwock has been slain with no need for a vorpal sword. There follows a silence broken only by the hiss of the robot’s cracked boiler and the sobs of an officer whose sanity trembles.

With the doors broken down, a crack Counterterrorist team of soldiers cautiously enters the house. A moment later, the building erupts into a smoking column of dust and brick and flame and noise. Officers and robots standing nearby are tossed aside like toys before the sweeping arm of a giant malevolent child. [Rewind/fast forward- the image is shown again and again. A different angle, now in reverse. Guitars wail.] A pit filled with rubble is all that remains of the historic building and the living anachronisms that occupied it not a few moments earlier. Officers stand back with guns at the ready, their ears still ringing from the roar of the blast. A minute passes. Five minutes. Still no one emerges, and at last they give the signal for the medical technicians to approach. There won’t be much work for them tonight. An officer lights up a celebratory joint [buy Rasta Joints, mon! De’re da best on de market!] What’s left of the iron behemoth crashes down the stairs, bursting and steaming. The Jabberwock has been slain with no need for a vorpal sword. There follows a silence broken only by the hiss of the robot’s cracked boiler and the sobs of an officer whose sanity trembles.

COUNTER-TERRORISM DIVISION UNIT #42A
TRANSCRIPT 2/15/37
20:07-20:10

“BOOM! Did you see that Clyde? We got ‘em! We got ‘em good!”

“We sure did, Carl. Looks like our job’s done here.”

“I’ll say. Nothing left of the manor or the terrorists. Nothing left to do but go home and fill out the paperwork. Might even be back in time to catch the game. Wanna join me, Clyde, you old dog?”

“I’m an old man, Carl. I’ll probably just drink some milk, read my book here, and go right to sleep.”

“I see… All right then. Good night, Clyde.”

“Good night, Carl!”
And now I find myself crouched in the darkness, cowering under a desk like an animal cornered in its hole. Police lights flash through the window, turning the room blood red for an instant every other instant. Half of us are down, injured or dead by CTD attacks—Mr. Magwitch, our wise, kindly leader suffered a fatal heart attack during the first exchange of gunfire. The air is muggy and thick with the heated vapor we have been using to neutralize their nanotechnology. It is difficult to breathe, almost impossible to see these words as I write them. I can hear sobbing somewhere—either one of the hostages or our own number. It has not even been a whole day and already we are exhausted and frightened and ready to surrender.

Despite the desperate situation I now find myself in, despite the terrible mistakes that we have made, some mad part of me still has hope. Not for our survival or freedom, but for our cause. It is a mystery, this unfounded naivety that infects me. What cause could I have—in the face of humanity’s apathy, in the lure of its unthinking laziness—for hope?

A memory. The memory of a sick, happy little boy, curled up in bed with a book and a smile. He travels across a vast and impossible universe of robots and dinosaurs, wise heroes and monstrous villains. It is a world unlike his own, and he knows that once he has been there he can never leave.

For as long as there are Doc Savage pulps and Jules Verne stories and little boys and girls to read them, our struggle will never die. The revolution will continue silently in the imaginations of men and women who go to work and live their simple lives. Though they may look like bankers, constables, and tax-men to others, in their hearts they are warriors and wizards, kings and queens in a world that can never be sullied. Someday that world will pour out into this one, through these men and women, and what we have started here—what others started millennia before us—will be complete.

We have decided to release the hostages. They may call us terrorists, but we are not. We are revolutionaries, and we will fight with honor to the bloody end. Father, mother, whatever they may tell you, know that your son died a man. I have no regrets, save that I did not spend more time dreaming. Good-bye.

The lights go out—all but one anyway. The old army-man reaches under his desk and pulls out a tattered and dog eared book. A slight smile crosses his weathered face. He opens it to the first page and the smell of molding pages ushers up a memory from childhood. Soft cartoon sheets wrapped tightly around him, his mother’s voice transmuting the blocky printed words into music.

“Chapter 1,” he reads quietly to himself, “Down the Rabbit-Hole...” 🝥
Ladies and gentlemen, welcome to this primer on scratch building custom hats. I will be your guide into the world of inappropriate millinery. I am not a professional hat maker and I don’t own a block to save my soul. So you might be asking at this point, what qualifies me to be teaching people how to make hats? A most excellent question!

Let’s ignore for a moment that I get lots of compliments on my hats from strangers. Let’s pretend that working on a project like this isn’t a total blast to do. Foremost, I wrote this article because I want to put the spark of creation in people! I believe in looking to the past for inspiration, but that we also must move forward with that inspiration to craft a new world for ourselves. I believe that most of what you can buy in a store today is boring and unimaginative. And above all else, I believe that it’s time to start this project!

I Research and development.
The most important step! While each step in creating something original matters, the way you approach this is going to colour the whole project. It really helps to have an idea of the outfit or at least a general concept of your target style in mind while doing this. One really good way to research this is to get a couple books on Victorian and Edwardian fashion. Check used book stores, the library, and the internet (through online bookstores, or sometimes just an image search will do the job). The more pictures the better obviously, and there are numerous good books out there on the subject. We are lucky in that it was the first fashion era fully photographed and documented for us to look back on. Just keep in mind that the everyday wear was much less photographed, so the pictures you find are going to be skewed towards the upper crusties.

It doesn’t matter if the book focuses on hats; they were so much more common back then that you will find plenty of inspiration. I am personally drawn to Edwardian fashion, so I decided to make myself a picture hat, and that’s what this project is. However, the instructions I will be giving you are highly variable, and please feel free to experiment and try new things. You can use these steps to make a bowler, a bonnet, a top hat, a sunhat, or just something crazy and new (and please do!). I will do my best to make suggestions and point out places where adjustments can be made for taste.

Pay attention to trim, as what you put on a hat can really make or break the whole concept. If you don’t have any ideas jumping out at you at this point, you can always go with the standards: goggles, cogs, or feathers. The more creative you are though, the better. Try to put some of your personality into it with an old keepsake or something that represents the kind of person you want to be. Maybe use bits of hardware you find on the ground, or cut a design out of a sheet of brass. Build something out of copper or brass pipe, add a gauge or a dial of some sort. Perhaps you could build a small model of an airship or a steam engine? Don’t be afraid to have some fun with it and be bold! This is not fashion for the tame of heart.

II Materials.
Gather as many of the materials you can before starting work, because nothing vents the steam out of a project more than having to run out for more parts. I don’t feel there can be a strictly limited list of parts, because only you know how you like to work, but here is what I use to build these hats:

Supplies:

Material. What you choose to use will have a huge effect on the final look of the hat. If you are building a hat with a very wide brim, try to use something stiff, strong, and without a lot of stretchiness to it. I use a high quality artificial leather due to personal values, although obviously real leather would work just as well, although it is harder to work with and you may need other tools. Also good would be a strong wool, denim, or upholstery fabric. I always try to recycle something old into a project like this, so maybe look at the jackets hanging in the closet that no one wears anymore.

Ribbon. This will form the hatband that goes around the crown, and the chinstrap if you decide you need one. Again, your choices here are many. Check out a local craft or sewing shop; you’ll only need one spool.

Wire, snips, and electrical tape. Optional! If you make a hat with a huge brim, you’ll probably want a thicker gauge wire to keep it steady. Make sure you have snips handy that can cut the wire, and the tape will be used to connect and protect the ends. You can get a bail of thick wire at most hardware stores for a couple bucks. To test if it will work, make a loop with it and hold it out horizontally. If the wire bends under its own weight, it’s not strong enough. The wire I used in the picture hat was about 1/8 inch thick.

Thread. I use button or embroidery threads because they are thicker and stronger than most machine threads. Oh yeah,
I should mention this project requires mostly hand sewing. I will mention the places where a machine can come in handy, so if you are going to use one, you’ll need regular thread for that too.

**Lining Fabric.** Optional. If you want something inside the crown to give it a more ‘finished’ look. Acrylic or cotton might be best here.

**Decorative trim.** Optional. Lace, something smaller (1/4” to 5/8”) to subtly trim the outside of the brim might be nice? Grommets if you want to add venting. Rivets if you like them. Rope, if you want to run it through the grommets to make a chin strap from it.

**Tools:**
- **Scissors.** The sharper the better!
- **A measuring tape.** A ruler won’t be very helpful here!
- **Marking pencil/pen.** Use something that will make a mark on your fabric without disfiguring it. For example, my picture hat was made of black fake leather, so I used a fine point sharpie. Most of the marks can be made on the wrong side of the fabric, so don’t worry too much about this.
- **Pins.** You’ll need a bunch.

### III The brim.

We start with the brim because it sets the shapes of everything else into motion. First, place the measuring tape on the part of the head that you want it to lay over. Note the size, and then lay out the fabric, wrong side up, on the workspace. A large flat area like a table or tile floor is perfect for a workspace (try to avoid carpet). Draw a dot in the center of the fabric that will become the brim. Place the loop of measuring tape (still the size of your head) around the dot as evenly as you can. It doesn’t have to be perfect, and heads are usually oblong, so try to match your shape as best you can for greater comfort. Use the marking pen to draw a circle that is the size of your head on the fabric. Next draw a slightly larger circle around that one about 1/4” to 1/2 of an inch bigger, depending on how thick your fabric is. You will want this to be a little larger than your head because we sew the brim to the crown (the part of the hat that covers your head).

Now we do the outside circumference of the brim. Stick a pin into the end of your tape measure and stick that into the dot you placed at the center of the brim. Now, lay the tape flat, radiating out from the center and find the width you’d like the hat to be. For my picture hat, I chose 10 inches, so the full width of the hat is 20 inches. For a bowler, you’ll only need an inch or two outside the crown. For a victorian sunhat or rainbow, if the top is larger, it will look like an oblique taper, so for a short hat you’ll want to keep the size close to the measurement of your head.

Draw another line, slightly bigger (1/4 to 1/2 inch again), around the outside of the top measurement. Cut along this outside line.

So here’s when it gets a little harder. The sides of the crown might take a little practice, so use paper to test out your design first. The more tapering there is between the inside of the brim and the crown, the more the shape will look like an acute rainbow. If the two sizes are equal, it will look like a long rectangle. If the top is larger, it will look like an oblique rainbow.

**Tools:**
- **A measuring tape.** A ruler won’t be very helpful here!
- **Marking pencil/pen.** Use something that will make a mark on your fabric without disfiguring it. For example, my picture hat was made of black fake leather, so I used a fine point sharpie. Most of the marks can be made on the wrong side of the fabric, so don’t worry too much about this.
- **Pins.** You’ll need a bunch.

### IV The crown.

The tricky part! The crown of the hat also has a lot of control over what the end result looks like, so it’s good to know about how high and how wide you want the top to be at this point. If you want a tophat look, make a circle on the fabric the same size and shape as the first one that started the brim out. If you want a slightly tapered top like a bowler, make it 1/4 to 1/2 of an inch smaller. If you want a bonnet, make it 3/4 of an inch or more smaller. The taller the top is, the less it will taper, so for a short hat you’ll want to keep the size close to the measurement of your head.

Draw another line, slightly bigger (1/4 to 1/2 inch again), around the outside of the top measurement. Cut along this outside line.

Now when we join the brim to the crown, we need to make sure we have the right side facing out as well. When pinning the top down, you’ll want to

Once you have the side shape, trace it down on the fabric and then draw another line around it, slightly bigger by the standard 1/4 to 1/2 inch. This outer line we will again cut along. Put the shorter ends together (right sides facing together) and sew on this line to form a loop of fabric. Keeping the loop wrong sides out, pin on the top of the hat wrong side facing out as well. When pinning the top down, you’ll want to
mind how tight it is across the sides. I start with pinning the 8 cardinal directions first so it’s evenly distributed around and looks flat. If you want the top of the hat to bowl out a bit, pin the top looser and closer to the outer edge of the top piece.

You might be able to use a machine here to sew the top on, but I prefer to do this part by hand. It allows for an even placing of the top along the seam with the sides. And this is important to the hat looking clean and professional. If you want to add any decorative rivets or venting to the sides, like grommets or such, now would be the time to pop those babies on. Be careful to leave room for the ribbon hatband.

Now, if you want a rounded top, you can pin the overlap fabric from the last seam we made to the side of the hat and sew it down. If you want a more flat type of top, pin the overlap fabric to the top of the hat and put a seam there. Now pop the crown right side out and move to the next step!

V Hey, is that a hat?
Carefully pin the inside circle of the brim to the bottom circle of the crown. Use the technique from the top to make sure the crown meets the brim as evenly as possible. This is another seam that really needs to be done by hand. Make sure it’s strong, maybe do it twice if you’re not sure.

If you want to have some kind of lining inside the hat, make a copy of the crown out of your lining fabric and place it inside now. Once you’ve attached the pieces together, fold the overlap fabric up inside and pin it down tightly against the side of the crown. This is why we left a little extra room in there. Add a seam on the overlap to lock it in place. Don’t worry; we’ll cover this seam up with the hatband. If you want to have a chinstrap on the hat, add it now by sewing it on the inside rim of the brim. Usually two 2-3 foot long lengths of ribbon will suffice. Place them right in front of where your ears are on the hat.

VI Explo! You made a hat!
Last part of the hat is the hatband. While they do make hats look distinctive, they are more than decorative. Hatbands help the hat keep its shape and size from warping during wear. Simply make a loop out of ribbon that fits snugly around the base (maybe even have a friend help you do this while you wear the hat) and sew the ends together. Then take a small length of ribbon and place it vertically over the seam in the loop. It should be long enough to fold the top and bottom over to the inside of the loop. Sew the second loop to the first one where the upper and lower edges meet the big loop. Slide the hatband down onto the hat and if the sides taper a lot you might need to sew it down in a couple places evenly around the crown so it doesn’t fall off.

That’s it! Add decoration to your heart’s desire and enjoy! 😊
SPM: If you could introduce yourselves, and some of your various projects?

D: My name is Donna Lynch, I am the co-writer and singer for Ego Likeness and The Trinity Project, and I am a horror writer. I have a novel coming out this summer called *Isabel Burning* on Raw Dog Screaming Press, and I have a couple of poetry collections as well.

S: My name is Steven, I am a painter, I make stuff. I make visual art, paintings, music, I do a teeny tiny little bit of writing. I have a novel coming out this summer called *Isabel Burning* on Raw Dog Screaming Press, and I have a couple of poetry collections as well.

D: I work in retail, I bartended, whatever.

S: We both did artist modeling...

S: I don’t think that we have a lot of choice. Neither of us function well in a day-job environment. There are too many ideas, and you just have to learn how to get them out. Turning those ideas into our business is the only way that makes sense to us to survive.

S: Well, it happened in increments... you find one way that you can utilize a talent to help you survive, like art sales. People becoming aware of our bands helps a great deal, and then writing... it all begins to cascade, and all work together. One thing influences another thing, and another, and another.

S: We’ve both had a wide variety of odd jobs. I was a bike courier for a long time, I worked at the Kennedy Center for the Performing Arts, I’ve DJ’d...

D: I worked in retail, I bartended, whatever.

S: What do you think is the difference between an odd job and career then?

S: I don’t want to be an artist model for the rest of my life.

D: I didn’t want to be doing any of the jobs I was doing.

S: A career, by nature, has potential to grow. There’s not a real high ceiling for bike courier or bartender or whatever. You can make a lot of money doing those things, but they are what they are.

SPM: How did you set up your life around your work? What is your lifestyle?

S: I was invited to join them as a live drummer on tour with their band Ego Likeness, and I used the opportunity to interview them about living their lives, steampunk, and their roots.
S: You have to want it more than anything else. Otherwise you're not going to take it seriously enough to make it work.

D: You have to sacrifice a lot of stability if you want to do it full time. That's too scary for a lot of people, which is understandable. It's scary for us too. But, like Steve said, you have to want it so much that you're willing to give up pretty much anything else, and that you're willing to pay whatever price you have to pay in order to make it work.

S: And a lot of times you have to be prepared for negative attention. One of the things that I always tell people about being in bands is that you have to be willing to suck in public. You have to put your music together and put it out there, because it's not doing you any good waiting to become perfect. It's never going to be perfect. The moment we finish an album and it goes off to be mastered, three seconds after it's out the door, I realize something I should have done differently. It's never going to be as good as you would like it to be. And if you continue to try and make it that way, it will never go out into the world. You have to let there be rough edges. If someone calls you on it, you have to just say: "Well, next one will be better."

D: I think a lot of people want to know what the magic formula is to getting an art show, to getting your band signed, to getting a book published, and there isn't one. There are no magic tricks, there is nothing that someone is going to tell you that will make that happen for you. You just have to keep making stuff, whether anyone is paying attention or not, and you have to keep doing it until people start paying attention.

SPM: A lot of your work is about the interaction between humanity and science, humanity and machinery, the medical sciences, etc...

D: It's easy to fit these things onto opposing sides, but they're not. Humanity and science, technology, machinery, it's all the same. We have technology because we made it. It's part of us, whether want to admit that or not. I think people want to think of humans as these very natural beings, but what if it is in
our natures to make things that have the capacity to destroy? That's part of who we are, and there are a lot interesting and dark places you can go with that.

S: Part of being human, something that we pride ourselves on, that we use to set ourselves apart from the rest of the animal kingdom (even though it's not technically true), is the ability to use tools. A lot of the work that I do is about the interactions between humans and themselves, looking at people as meat, how technology plays with that.

SPM: Would you make things if there was no audience? If you were on a desert island?

S: (laughs) I used to make things with no audience. The fact that we have an audience now is really wonderful. I think that is something that people don't get all of the time: the amount of stuff that you see, out in public, in the real world, is the tip of the iceberg compared to things that get rejected or put aside because they aren't done or ready. There is a ton of work that gets done that the audience never sees. But the stuff you do see wouldn't be there without the stuff that you don't see.

SPM: You mentioned that the public work is the tip of the iceberg, and one of the things I wanted to talk about is building things from the ground up, about your roots in DIY, and the punk aspects of steampunk.

S: What you make, music or art or whatever, it's your kid. And nobody else is going to love your kid or have faith in your kid as much as you do. So you can wait around and tell people all your brilliant ideas and hope that someday someone will fund you, without actually having seen you do anything. Or you can do it all yourself. When we put an album together, we do all of it ourselves and then it goes off to the record label as a finished product. It's not dictated to us.

In order to survive, we've had to do as much in house as possible, making the buttons and making the t-shirts. It's amazing that we're in a place now where we actually have to look at outsourcing a lot of that work because there's enough of a demand, but without having done everything ourselves we wouldn't be able to get where we are. We have a booking agent because we spent years booking every show on our own. Now we're fortunate to have enough of a fanbase that we don't have to do that. It's the same kind of thing.

As for steampunk, I think there's the roots of any of the – punk movements... steampunk, cyberpunk, my own personal favorite, biopunk—mostly because I think I invented that, or at least I'm going to claim I did. The punk part is taking ideas from multiple sources and... the journal of misapplied technology. What a wonderful tagline by the way! [editor's note: Steve suggested the theme for issue #2.]

It's about taking things that already exist and manipulating them in such a way that that manipulation becomes art. Trying to look at technology in less obvious ways.

Much of my artwork is about taking technology and changing the original application of it. Using a lot of turn-of-the-century source material... back when everything was still solid-state. Things that, if you knew enough about it, anybody could build in their backyard. I find that very appealing.
D: One of the things about punk rock that always appealed to me was that you could pretty much do whatever you wanted. If you wanted to stick a safety pin through your cheek, go ahead. If you wanted to rip your clothes up, go ahead. If you wanted to have a mohawk, paint your face, it wasn't wrong, it was fine. You just needed to do it, and be committed to it. In the underground culture these days it feels like everything is much more uniform. Like you have to wear the specific uniform if you want to call yourself a specific thing. And you have to use things the way they were meant to be used. And that's crap. Why do you have to do that?

It makes the world a much more interesting place, if you just do what you want, and be committed to it. Don't do it, and if someone calls you out, start backpedaling. Do it, and say: “This is why I did it, and if you don’t like it, you can fuck off.”

S: I think it’s a sad state when subcultures that define themselves as not being part of the status quo have just as much of a uniform as the rest of the world. The entire reason this scene exists, and I’m talking about counter-culture going back to the 70s, and modern art and all of that, is people deciding that you can be whoever you want to be as long as you accept the consequences of those actions.

I think that people get wrapped up in the idea of being rebellious as compared to actually being rebellious and actually being who they are.

SPM: A lot of your roots in the punk/goth scene were back when they weren’t so divided between the two, you just had multiple labels for different aspects of something. With steampunk we’re hoping to not be “you must be the following”

S: Way back in the day, industrial was still punk, and goth was still punk. You would go to Skinny Puppy shows and all the punks would be there, and you would go to Minor Threat shows, and you’ve have goths over in the corner. It was always coming from the same place.

Then it got subdivided and subdivided and subdivided, and now you have people who say, only listen to Amazonian powernoise, and think that everything that isn’t Amazonian powernoise is bad. By making it about you, instead of about the music in general, you kill it. Everyone has their own niche and no one is supporting the group as a whole, which is a major problem. I don’t know how to get beyond that.

Steampunk, Cyberpunk, it’s all punk. And the punk part is the important thing. The rest of it is just aesthetic variation. The punk is the part where you step up to the plate and actually take control of your life and how you look, and make those choices. The rest of it is just dressing.

To find out more about Steve & Donna’s projects, go to www.egolikeness.com
awoke earlier than usual this morning with an overwhelming urge to escape the confines of my hotel room. Hearing that Grober was still snoring in the adjoining room, I decided to venture out alone. I find that the early morning is often the easiest time for me to risk such a journey as the opportunity for confrontation is at a minimum. I dressed hastily in yesterday’s clothes, pulled on my hat and coat, and headed toward the lobby. Once outside, the thick London fog served to further preserve my anonymity. Wrapping my scarf around my mouth so as not to inhale too much of the noxious vapour, I set off for a short stroll around the area. The hour meant that the streets were all but deserted and my footsteps seemed curiously amplified as I walked. As time passed the sound began to grate upon me, setting my nerves on edge, making me feel rather conspicuous and ever more conscious of being alone. I stopped and stood silent for a moment, trying to settle my breathing and regain some composure but it was then that my imagination turned upon me. The encircling fog became a mere cloak behind which a host of nameless horrors watched and waited. I felt a nauseous wave of panic rising within and soon I was in the grip of a waking nightmare; my stinging mind reduced to a mere passenger of a frantically stumbling body. In the midst of my terrors I observed a body slumped in a shadowed doorway and in that instant I knew it was but one of the many slain by the things which lingered just beyond my sight enshrouded in smog. I forced myself to slow a little and called out to the figure. The weary drunkard responded with a slurred curse which momentarily cheered me until I was struck by the idea that he might give chase.

When I arrived back at the hotel’s lobby I was anxious and greatly out of breath. As I struggled to free myself from the suddenly oppressive closeness of my hat and scarf, a concerned looking porter approached. Vexed as I was, I could not even gather my thoughts enough to correct the boy when he addressed me as “Miss”. Eventually, having caught my breath and assured the fellow that I was simply exhausted by the briskness of my early morning walk, I ascended the stairs and returned here to my room.

My worries were quelled as soon as I heard the rumble of Grober’s snores once again. I remind myself that these panics, upsetting as they are, are something of a necessity; they present me with the reality of what a life without Grober would be. They allow me to see the world as I would without his guidance and assurance and therefore understand the immense benefit his companionship affords. It is also fair to say
that they provide me with occasional bursts of exercise which I should certainly benefit from. I have undressed and returned to my bed, ensuring that my friend shall have no knowledge of my venturing out alone.

**November the 16th (evening)**

At eleven o’clock this morning Grober and I met with a gentleman named Shandon in a Soho café.

As usual I made a few brief notes about our client during the meeting so that I may refresh my memory as to his personal details at a later date. My notes were as follows:

Mr. Jeremy Shandon is a gentleman in his middle forties, slightly overweight but seemingly in good health. He dresses well, though not in the manner of one who has any real interest in clothing or fashion per se. He is a man of reasonable wealth, having worked for many years as a jeweller here in London, but is now retired.

Mr. Shandon contacted Grober and myself concerning a recent change in the temperament of his lady wife. He asserted that this change began only two months ago, after a visit to a séance held in a private residence. Shandon confided that his wife had attended several such events previously, and whilst he holds no particular beliefs on the matter of spirits or life beyond the grave, he had no objections to her doing so. Her experiences were quite typical of those commonly reported to occur at such events; she saw objects lift from a table in a darkened room, felt drafts, heard noises, etc. However, upon the night of October the twentieth, Mrs. Shandon arrived home in something of a daze. She told her husband that she had seen “something” at the séance and feared that she may have been followed. Assuming that her nerves had merely got the better of her, Mr. Shandon reassured his wife as best he could and had their housekeeper put her to bed. In the days that followed Mrs. Shandon’s anxieties dwindled; she even joked with her husband about how silly she had been. She was however, keen to attend the next such event.

“Partly, I think, in an effort to prove to herself that there was really nothing to be afraid of,” Mr. Shandon told us.

Sadly, this was evidently not a wise course of action, as when his wife returned home from the next séance she was, once again, somewhat anxious. On this second occasion Mrs. Shandon insisted when pressed that all was well but declined to say much else. Her husband felt that she regarded him and the staff with an air of suspicion and over the following weeks she became increasingly introverted, speaking only when addressed directly. Their only detailed discussion arose when the eve of the next séance was at hand. Mrs. Shandon expressed her desire to attend the occasion and Mr. Shandon explained that he did not think it would be prudent to do so in light of how she had been affected by her previous visits. At this, she apparently seemed hurt and confused, “as if my words were a betrayal of some kind,” and said nothing more on the matter. Mrs. Shandon’s temperament has remained bleak since that time; she speaks less and less and her husband fears greatly for her sanity. He is a kind man and obviously cares a great deal for his wife as he has resisted having her committed to an asylum in favour of enlisting our help. It is his wish that Grober and I should investigate the gentleman responsible for these so called séances and expose him for a fraud. I should say that I do not anticipate that we will have very much trouble in doing as he asks, but whether or not the proving of this will return Mrs. Shandon to a sensible state is another matter entirely. Nevertheless, I am a great believer in the importance of putting a person’s mind at rest and, in this instance, though he did not say as much, I believe that Mr. Shandon wishes to be certain of the medium’s fraudulence as much for his own sake as for that of his lady wife.

**November the 17th, 1865 (afternoon)**

After much to-ing and fro-ing, Grober and I are to attend a séance tomorrow evening. The event will be presided over by Mr. Sam Thonlemes—an American spirit medium from California. He and his staff have lived in the house for some ten months and have given bi-weekly private séances for the duration of that time. These are the very events which our Mrs. Shandon had been attending these past months. We sent an errand boy to Thonlemes’ address this morning, with the instruction to purchase two tickets for the evening’s event in our names. However, these séances are evidently very popular as we received word that there were no
places available. We were advised that, in a little under one month, Thonlemes would be staging the first of many proposed larger events which may be attended by as many as fifty persons and that a few seats were still vacant. Logically, we can not afford to wait so long and so, handing the matter over to Grober and his methods, we eventually secured our place at tomorrow’s table by offering a sum of money to a member of Thonlemes’ house staff. Her request that we should arrive slightly earlier than the allotted time makes me assume that we must be taking some unsuspecting couple’s place. Grober assures me that all is well, but I do hope they are not too greatly inconvenienced by our attendance.

**November the 18th (evening)**

We have returned to our hotel after having been somewhat prematurely ejected from the home of Mr. Thonlemes. Nevertheless, the evening’s events have provided me with much to think upon.

We arrived at the residence at a quarter to the hour as instructed by our girl and it was she who met us at the door and took our hats and coats. Our associate took care in exclaiming stridently that she had taken our tickets, though we had no such vouchers to give, before showing us into the parlour where we waited for the other attendees to arrive. The walls of the room were decorated with a great many framed photographs, chiefly showing Mr. Thonlemes himself in various states of mediumship. There were images showing the man festooned in the curious substance which is referred to as “ectoplasm” whilst others showed figures or disembodied faces hovering about his person. All looked wholly unremarkable to me; not at all mysterious or captivating as one might imagine such things should appear. They seemed somehow too well defined, too deliberate to be genuine glimpses of another realm. Grober seated himself by the blazing fireside in a creaking oxblood chair while I paced around the room with interest. My eye was caught quite suddenly by a most curious-looking device that sat on its own small wooden stand at one side of the fireplace. The machine had a small metal cone or funnel sticking out from it which reminded me very much of a hearing trumpet. Upon closer inspection the contrivance resembled some form of clockwork musical box, though it seemed to be missing some of its parts.

My examinations of the object were interrupted by the entrance of some of our fellow séance attendees. Three slightly nervous-looking women, all apparently of an age with Mrs. Shandon, and of similar social standing, came into the room whispering to each other. They seemed quite taken a back by the presence of Grober and myself and one actually let out a little squeal as he rose from his seat to greet her. Whilst his size does sometimes cause a certain degree of shock to those who have not met him previously, in this instance it seemed to me as though the women were already somewhat on edge. Of course, in anticipation of an evening communing with the dead, heightened responsiveness to such a surprise is perhaps not altogether unexpected. Apologising, Grober introduced himself as, in turn, did I. The women seemed suspicious and reluctant to talk to us; they gave their names, nodded with the merest façade of politeness and then retreated to a
corner where they resumed their frantic, hissy whispering. Soon, we were joined by other paying guests; two young couples (newlyweds by their age and attitudes, the gentlemen having evidently had a little to drink), who seemed greatly excited and evidently presumed that the séance would prove an entertaining evening’s diversion. These were followed by elderly, bearded gentlemen and two more furtive looking ladies in their fourth decade of life. All were ushered into the room by a well turned out young gentleman who I at first took to be a butler but who introduced himself as “Mr. Thonlemes’ assistant, Gerard.” After a few brief introductions (Grober making a point of politely enquiring after the names of as many people present as possible) Gerard moved around the room gathering tickets. When Grober informed him that ours had already been collected, he appeared puzzled for a moment but seemed to accept his word.

"Some of you," and here he glanced briefly towards the huddled ladies in the corner, “will be familiar with how the events of this evening shall proceed. However, for the benefit of our new guests, and to refresh the memory of those who have visited us previously, I ask you to please give your full attention to Mr. Thonlemes’ speech.” Here I expected our medium to enter the room in the manner of a stage conjuror, the crowd having been sufficiently primed for his appearance. Instead, Gerard moved over to the device which stood by the fireside and set it in motion somehow (his body obscured the machine at the crucial moment so I could not make out exactly how he did so). A crackling sound came from the trumpet of the apparatus followed by a peculiarly accented voice which I took to be that of Mr. Thonlemes himself. Although I suspected some trickery at first, I soon deduced that the device somehow held an impression of the voice and was able to broadcast it just as a musical box does. I managed to get close enough to the machine to observe a little of its workings and saw that a thin needle-like arm touched upon a rotating shiny cylinder (which looked to be of wax or perhaps rubber). The impression was evidently upon the cylinder and “read” somehow by the needle. The message itself was rather dull; Mr. Thonlemes welcomed us and gave a set of rules about the need for quiet and calm during a séance, not breaking the circle which we would be seated in, not attempting to touch himself or any of the spirits, and so on. Despite the mundanity of the speech, a palpable sense of dread descended upon the room as the machine whirred away. I noticed that even the newlyweds appeared suddenly sombre and quiet. I am quite accustomed to such dark turns in my own temperament but it was odd indeed to see this happen to all those assembled as one.

Even Grober, whose expression usually gives very little away, looked suddenly rather uncomfortable. Gerard had left the room quite abruptly after activating the machine and we were alone with our disembodied host. Thonlemes’ communication was quite short but the machine continued to broadcast a scratchy murmur after his words had ceased. I made some comment about the device being very clever but my companions, evidently feeling ill at ease, seemed reluctant to engage in any conversation. Studying the appliance a little closer I found a small handle on the needle arm and, with a neat click,
disengaged its point from the cylinder. The crackle
and hiss of the impression halted abruptly and, after a few seconds, the mood seemed to lighten somewhat.

Unhappily, I had little time to reflect upon this as at that moment Gerard entered the room accompanied by two sickly looking gentlemen and the girl whom we had bribed. It was apparent that our game was up. Observing my proximity to the machine and the lack of sound coming from it, Gerard reproached me for “interfering with Mr. Thonlemes’ property.” The two gentlemen who accompanied him had evidently arrived late but each held his ticket in hand. Gerard pushed the girl forward; she had clearly been crying and proceeded to do so again. She confessed all, and myself and Grober were asked to leave. Under the circumstances there really was very little to be said; we apologised and left to catch a cab.

During the journey back to the hotel I asked Grober what he had felt whilst the cylinder played. He was reluctant to answer at first, claiming he hadn’t felt anything but then, staring out of the carriage window, I heard him mutter “Foolish”.

November the 19th (afternoon)
As expected, Grober had committed the names and details of all those to whom he spoke yesterday evening to memory and we had little trouble in tracking down the address of one of the newlywed couples. It is just after noon now as we travel towards their home. As always, I am amazed by Grober’s skill in these matters; I have great difficulty remembering names, indeed I often forget faces too. If a person speaks then I know them instantly, but their features are somehow less distinct, or at least create less of an impression upon me.

November the 19th (evening)
We called upon Mr. and Mrs. Jonathan Peterson just as they were about to leave for a trip. A carriage stood outside their home and several members of their staff were loading luggage onto it. Mr. Peterson greeted us at the front door, recognising Grober and myself as “the chaps who were thrown out last night”. Before I could correct him we were ushered into the parlour where a fire was already burning in the grate. After offering us a drink, which we declined, and pouring himself one, Mr. Peterson asked what he could do for us. I explained that we were curious to know what had occurred last night in our absence. He shuddered and took a healthy gulp of his drink “Yes, terrible business.” When I asked what was so terrible about it, Peterson sucked air through his teeth and looked pained.

“You mean you haven’t heard? I assumed ...”

He was interrupted by a terrific crash and a shattering of glass from somewhere above. A shadow passed the front window of the parlour followed by a dull, wet sound as something struck the ground outside. We rushed as one to the front door and, as we rounded the corner, a girl among the staff who had been helping with the luggage began to scream hysterically. An older woman, a maid by her dress, lay on the ground amongst the splinters of glass, her body twisted and broken and a look of terror upon her face. She was dead.

I turned my gaze toward her point of origin and there, framed in the jagged remains of a window, saw Mrs. Peterson glaring down at the corpse with the eyes of a lunatic.

To be continued.
The role of consciousness is too often overlooked in steampunk, both as a genre and a subculture. Steampunk should seek to incorporate the purposeful manipulations of the mind as much as it does technology, politics, fashion, and music if it is to be a proper subculture. The Victorian period, an era of inspiration for steampunk in both style and technology, was also a heyday in the exploration of mind-altering methods and technologies, many of them forgotten. The idea of “storming heaven” with the aid of drugs, technology, and science was a cornerstone of various Victorian subcultures ranging from the psychology circles of Vienna to the nitrous oxide salons of Manchester. We hope to resurrect some of these unique substances and practices so as to fuel the boilers of the imagination of today’s steampunks.

**Alienism and the Technology of Trance**

The mind has fascinated people throughout the ages, but it was the Victorians who took to changing the mind using the new science of psychology. Most people know of Breuer, Freud, Jung, and James and their attempts to cure lunacy and various psychological ailments. What is less known is that they all shared a fascination with altered states of consciousness. Breuer transformed hypnotism and somnambulism from parlor entertainment into a science. Freud not only dabbled in cocaine but was fascinated by the power of dreams and their ability to open new realms of understanding and experience. Jung was fascinated by the paranormal and the realms of the imagination. He studied “primitive” techniques to induce trance-like states that he hoped “would unfold the secrets of magic and miracles”. William James, the father of pragmatism, was fascinated by ecstatic states and wrote an entire tome on the “Varieties of religious experience” while “aliensists” (early psychiatrists) in New York sought to unlock the secrets of the dead using science and psychology. Below is a sampling of some of the techniques these alienists developed.

**Trance Devices** were popular in Victorian times for their ability to unlock the imagination. Poets, artists, and thinkers of all fields dabbled in the varieties of trance. Trances were commonly induced by hypnotism, among other methods. One of the more inventive trance-inducing devices was called the “witch’s cradle”. It was a swing-like device in which a person hung from a series of ropes balanced in such a way that it was impossible for the person to reach equilibrium. The individual was put in the harness in a darkened room and left to sway, turn and spin about in complete darkness, never coming to rest. Soon the person was “freed of orientation” and started to hallucinate like in a dream.

Another interesting device was called the **Kinetic Shell**, which is very similar to a magic lantern or the more modern dream machine. The shell had bars of primary colors painted on the inside, and when spun a tiny gaslight or candle would illuminate the shell. The individual would stare through one of the windows on the side of the shell and be bombarded with...
“The head is a machine. Even though we did not build it, we own it and thus have a right to tinker with it.”

– William James
colors. At certain rates, the flashing colors caused cognitive hallucinations (or epilepsy) in the user. There were literally dozens of such devices employed by Victorians to switch off the conscious mind and cross the threshold to other realms.

**Somnambulism** is most known as a sleeping disorder where sleepers walk or act out their dreams. However somnambulism actually covers a range of sleep-like states. Automatic writing and drawing were popular forms of induced somnambulism during the reign of Victoria. There were a number of techniques to achieve this, but the use of oracle boards (e.g. the Ouija board designed by Fuld) was the most popular. People, alone or in couples, placed their hands on a planchette or marker—either a pencil or a spyglass—that spelled out words and messages. Another trick was to have a person do a repetitive task, like counting back aloud by 3 from 100, while another person read poetry in their left ear. The individual then took a pen and, without looking, started writing or drawing, producing images/messages that they were not conscious of.

“Nerves” was a catchall term for a variety of emotional states that apparently no longer afflict modern people. Some of these nervous ailments were believed to have special powers to make people more sensitive to the imagination. Melancholy, exhausted nerves, acute sensitivity, and uncanniness were sometimes induced to allow the experiencer access to the secrets of the fantastic realms of the mind. *The Sorrows of Young Werther* by Goethe was one tool to achieve melancholy. The book was so efficacious that it was banned by four countries because of its “detrimental effect on the mind”. Goethe’s book was just one of many tomes believed to be able to infect the reader with temporary nerves. Music was another way to achieve these states of hyper-arousal. The music of Edgar Elgar was also believed to do damage to the nerves and cause one to experience “opium-like fevers”. Later, the Hungarian composer Rezso Seress wrote “Gloomy Sunday,” which was supposedly responsible for a spate of suicides throughout Europe. Others believed it produced a hypnotic trance in the listeners.

Art wasn’t the only way to inflame the nerves: physical techniques like **double ducking** were used by Victorians as well. Double ducking involved two barrels of water, one with freezing water and one with very warm water (scents were also added, mostly menthol). The person dunked their head in the hot water, counted to five, and then dunked into the cold bath. A black towel soaked in warm water would then be wrapped around the whole head (this was called “turbaning”), covering the eyes and ears. This treatment was believed to cause an outburst of emotions ranging from deep depression to feelings of elation.

Some alienists sincerely believed that by breathing in the last breath of a dying man one would re-experience his feelings at the time of death. This technique, called **Grave Vapours**, was used by Victorians to have novel, if morbid, experiences.

The **Psychograph** was another device used by some alienists to put a person in a trance state. The psychograph was a copper and leather crown that fit on the head and could send “magnetic pulses” to various parts of the head, “activating” parts of the mind. Psychographs were used by some artists and writers in an attempt to wake the muse by spinning electrically charged magnets around their shaved head.
NARCOTICS AND DRUG TECHNOLOGY

The rise of commercial chemistry and the widespread use of steel allowed Victorians to precisely and easily navigate the furthest regions of the mind. Below is a small sampling of the “artificial paradises” available to the intrepid Victorian drug user.

Opium is probably the best known of the Victorians’ insatiable quest to expand the mind with drugs. But opium flowered alongside many other psychotropics. The use of drugs to alter one’s consciousness has been with humans since the earliest days, according to recent paleo-botanical discoveries. Victorians did not invent drug use, but they endowed it with the power of industrial technology and science. Even aged-old opium was transformed in the mid-19th century into morphine (named after the Greek god of dreams). Not only was industrialization brought to bear on the poor poppy, but an arsenal of personal technologies were developed for its administration. The glass-and-steel syringe (also called an “angel’s tongue”) complete with delicate measuring instruments was first devised by Victorians to administer precise amounts of the drug directly to the blood stream, bypassing the less efficient process of smoking. Opium was added to various substances to create new and powerfully addictive blends like laudanum. In addition, the use of morphine-derived ointments became popular in the 1880s on both sides of the Atlantic. The pressurizer was an ingenious device constructed by a mad Englishman to “vaporize and pressurize” opium, creating a powerful mist that worked much like a modern day inhaler would, if it were powered by steam. Heroin was also first synthesized and used recreationally in the Victorian era, mostly by injection.

Absinthe, known as the “coca of the 19th century,” was a distilled liquor with additive wormwood. The distillation process involved many steps, and complex technologies were used in the process including a “steam valve-turbine” that made the wormwood oil dissolve in alcohol and other substances. Wormwood, when combined with alcohol, becomes a narcotic producing a variety of disturbing physical and mental effects. Known as “the green fairy,” “the plague,” “the enemy,” and “the queen of poisons,” absinthe was described as mind-opening and hallucinogenic, and most commonly induced a state of “lucid drunkenness”. Prohibitionists believed it to cause anti-social behaviors, “turning good people mad and desolate” partly because it was associated with inspiration and freedom and became a symbol of decadence—characteristics counter to Victorian sensibility and propriety.

First synthesized in 1832, chloral hydrate was the first depressant developed for the specific purpose of inducing hypnagogic hallucinatory sleep. Marketed as syrups or soft gelatin capsules, chloral hydrate takes effect in a relatively short time (about 30 minutes) and induces sleep-like trance in an hour. In Victorian England, a solution of chloral and alcohol constituted the infamous “knockout drop” or “Mickey Finn.” It was used to create highly-charged visual landscapes similar to the state before falling asleep. Chloral hydrate was even added to fancy French and Swiss chocolate in the 1870’s. Another popular way to administer the drug was through a pressurized enema device called the “shooter” which could deliver precise amounts of chloral hydrate to the porous mucous membranes of the anus.

Though nitrous oxide was first synthesized in 1775, it took the era of Queen Victoria for it to catch on as a recreational drug. It took nearly two centuries for the technology to develop in such a way so the odorless drug could be properly administered. Large canisters of nitrous oxide were set up in parlors and “sweet gas” salons became a popular (and legal) form of entertainment during the late Victorian period. In fact, a cottage industry of designer nitrous masks was started in the 1870’s for the fashion-conscious drug user.

Ether (a potent mixture of chloroform and ethanol) was popularized by free-thinking women of the 19th century. It was considered improper for women to drink, smoke, or use other drugs; yet “angelic vapours” were strangely not frowned upon by the sexist Victorian society. Ether produced a similar effect on these women as nitrous oxide had on the men, creating a sense of euphoria and eliminating the suffocating social restrictions of the time.

Perhaps the strangest of the drug fads that swept through Victorian England was the dabbling in Orangutan adrenaline. Adrenaline from various apes and monkeys (all branded as “Orangutan”) from across the empire was distilled into an injectable form used by a variety of bohemians and decadents in England. The users claimed to gain “primal energy and insight” from the injections. Newspapers of the time claimed the shooting up of “jungle animal blood” created scenes of rapt primitiveness in otherwise civilized people. It is suspected that Poe’s Murders in Rue Morgue may have been inspired by an infamous (though fictional) tabloid account of a murderous Orangutan adrenaline party in London.

With this paltry sampling of Victorian techniques for bending and expanding the mind, we hope to provide steampunkers food for thought to enrich their art, literature, and lives.
ANN AND JEFF VANDERMEER ARE A POWER COUPLE OF SPECULATIVE FICTION. ANN IS THE EDITOR, JEFF IS THE WRITER. TOGETHER, THEY HAVE DELVED INTO PUBLISHING BOTH DIY AND MAINSTREAM, AND THEY ARE COMPILING AN UPCOMING STEAMPUNK ANTHOLOGY. HAVING JUST FINISHED JEFF’S CITY OF SAINTS AND MADMEN, I TRACKED THEM DOWN AND SPOKE TO THE PAIR OVER SPEAKERPHONE ABOUT PUNK ROCK FICTION, STEAMPUNK, AND CARVING OUT A LIFE FOR ONESELF. ALL THINGS DEAR TO MY HEART.

SPM: Perhaps you could start by introducing yourselves, mentioning something about your projects?

A: I’m Ann Vandermeer. I ran a publishing company for almost twenty years called Buzzcity Press. I published the surreal magazine “The Silver Web” and also published Jeff’s Dradin in Love and Michael Cisco’s The Divinity Student. Now I am the fiction editor for Weird Tales Magazine as well as editing various and sundry anthology projects with my husband.

J: I’m Jeff Vandermeer, and my first love is fiction writing; that includes both novels and short fiction, but I also do a lot of reviews, essays, editing a lot of anthologies with Ann. Eight anthologies next year actually. In addition to that I ran a publishing company—and now run a publishing company again. Ministry of Whimsy Press has been resurrected and is coming back next year with a project called Last Drink Bird Head, which is a charity anthology for literacy that includes everyone from Gene Wolfe and Peter Straub, to Henry Kaiser who scores all of the movies for Werner Herzog. The project may also include a CD, and in addition to the offset book there will be a print-on-demand accompanying volume that isn’t fiction but is a series of interviews with the authors about their relationship to books called Love Drum Book Head.

SPM: The two of you have been editing fiction for a pretty long time. What could you say about the history, and growth, of steampunk?
J: I first encountered it because of K.W. Jeter. I think he was the first one to popularize the term for people like me, even if it existed before that. I know that Michael Moorcock had been doing stuff in the late 70s that is all steampunk, and of course it goes all the way back to Jules Verne. I think what is interesting to me is how it has become not just a literary thing, but also a cultural phenomenon. There was actually a debate about this on my blog [www.jeffvandermeer.com]: Cat Valente, another writer, was guest-blogging, and she was talking about how steampunk has come to mean a lot of things that she doesn’t believe are steampunk. The thing about any term or movement is that where it begins and where it winds up are two vastly different things, and ultimately it’s not up to critics or reviewers who decide that, but readers and people who pick up the term and make it their own. That’s what is most interesting to me, and that’s why our steampunk anthology isn’t all strictly speaking what you would call ‘core’ steampunk. Some of it is Victoriana type stuff that is kind of steampunk, some of it is the missing link between cyberpunk and steampunk. I just like the fact that the term has come to mean a lot of different cross-pollinating influences.

A: What brought me first to steampunk were comics—Alan Moore’s _League of Extraordinary Gentlemen_—and movies. I looked at it from a different starting place than Jeff. I think that made the anthology what it is, because there are all kinds of different influences stemming from steampunk. Like Jeff said, it’s not just a literary movement; it has become so much more than that.
SPM: In a post to your blog, Jeff, you mention that a lot of short fiction has been falling short of late. Specifically, you say that you “...keep coming back to words like rough, wild, pushing, punk, and visionary” but aren’t finding that. What do you, either of you, think that it would take for fiction to be punk?

J: Someone responded to that post, pointing out that the word punk has been so commercialized that it doesn’t mean anything anymore, but I meant it in the original sense. Punk music got past stylized arrangements, and ways of doing things that weren’t really related to real life, by doing away with the idea of nuanced musicianship, in a sense. Anyone can pick a guitar.

For fiction, I think that it’s similar in that we are perceiving the world with too many layers between us and what’s actually outside. I’m not anti-technology, but I do think that the commercialism in our society, and the ways that we use technology without thinking at all about the implications of what it means for our context of ourselves as human beings, means that a lot of writers are seeing the world through a veil. There are a lot of stories that come into the slush piles of various projects of ours—and a lot of other published fiction—where the writer doesn’t seem like they live in the real world. It doesn’t feel like they’re connecting with anything real. That’s what I meant by the punk comment.

Writers are supposed to be receivers of what’s out there. They are supposed to soak it up; they are not supposed to have a filter to begin with. And there are so many ideas out there, coming in through the internet, through the media—and we allow ourselves to be hemmed in by those things that give us creature comforts—that I think its doing a lot of damage to our ability to write good fiction.

I wasn’t just posing this as an ‘I’m doing all this great stuff and you guys suck” comment; I posed it as something that I ask myself all the time. What a good writer should do too is be constantly recalibrating how they see fiction, and constantly challenging themselves to be better.

The other thing that makes it difficult is that genre fiction came out of the pulp tradition, came out of the situation of pennies for words, where writers were writing a lot of schlock to fill pages. It was a very commercial thing. There’s still this tension in genre fiction between being a little suspicious of art for art’s sake, of still valuing the commercial over the literary. So anytime you bring up these topics, people begin to get upset about it, because for some, their view of fiction is still too much on the commercial side.

But what I was getting at with punk is to get rid of this veil that is over a lot of writers eyes, in my opinion.

A: I come to this question from a different perspective. I spent four years of my life playing bass in several punk rock bands—this was back in the late 70s, early 80s—and the way I
look at that word “punk” is that it is something that is pretty much open to anybody. Let anybody give it a try, but be true to yourself. That was the way that we approached everything. The different bands that I played with, we were just doing what we wanted to do, to hell with what was out there, what was popular, what was commercial. We were just doing what we wanted to do, and maybe we connected with people and maybe we didn’t, but at least we were true to ourselves.

I see the same type of thing in a lot of the fiction today, not just in my slushpile but also in what’s published. I see people being very, very careful. It’s almost like they are censoring themselves in a way. I would rather see a writer just do what they want to do, put it out there, shake it up and see what happens. If they have to go back later and do something else with it, then fine, but the initial spark, that initial creativity, is what is missing in a lot of the fiction that I read. I am seeing too much formulaic stuff. One of the things that the punk movement brought to the music industry was to question this tendency. It shook things up and got us—thank god—away from disco and stuff like that. I’d like to see more of that kind of reaction in the fiction world as well.

J: Just to follow up, I don’t want to misrepresent the fact that there is a lot of really good stuff being done out there too. Obviously there is, or we wouldn’t be editors, we wouldn’t be readers. I mean, I wouldn’t be a writer. That was something that was also lost when I posted that... the preconceptions of the foundation of where I was coming from—which I just assumed people would realize—is that there is a lot of great stuff out there as well.

SPM: One of the things that really struck me about [Jeff’s novel] City of Saints and Madmen is that when I first picked it up and was looking through it, I felt like I’d picked up a zine anthology—like a Cometbus or Doris zine anthology—because it was all these different self-published bits, even if they were completely fictional self-published bits, all strung together with seemingly-random page numbers. That was definitely one of the things that drew me to it—although the book actually works as a novel as well.

J: I thought one of the best ways to make a place real was to present facsimiles of things that were actually published in that world. I like the idea of a mosaic approach, as a view of reality, because the fact of the matter is that the way we get our information in the real world is very fractured. We build up our view of events or people or whatever else from a lot of different sources, and I liked the idea of putting everything together in such a way that the reader would have to go through all of it and make up their own opinion on vastly different views of the same person from one story to another.

It’s not that I think that people should have to write didactic pieces of fiction that reflect their political point of view or stuff about the environment, but when I read a near-future SF novel that has some throwaway line about “oh, we solved global warming 20 years ago,” I just don’t buy it.

SPM: As a bit of an aside, I recently interviewed Ursula K. LeGuin for a project of mine, and I asked her why so many short-fiction markets today intentionally avoid work of a political nature. Her response was, essentially, one of surprise and sadness. “But maybe this is one of the reasons why I’m not reading much SF any more. I pick it up, then I put it down. Maybe I just o.d. on it. But it seems sort of academic, almost, lately. Doing the same stuff only fancier, more hardware, more noir... I may be totally wrong about this.” It reminded me of what you two were talking about with what was happening with fiction.

A: One of the reasons may be that a lot of publishing companies are going the safer route. They’re looking for the lowest common denominator that’s going to sell the most books. Perhaps the reason why Ursula K. LeGuin is having a hard time with some of what she is picking up nowadays is that a lot of what you’re seeing in science fiction is more for the effect of “wow, isn’t that cool, isn’t that neat,” and there’s really no connection to the people.

When I pick up a piece of fiction, I have to have a connection to the people, whether they’re aliens or humans or whatever. There has got to be something there that grounds me and has something to do with my reality for me to engage in it. And it’s not just in fiction, it’s everywhere. Everyone is being a lot more careful, a lot more politically correct, and looking for things that are in their comfort zone and they are afraid to get out of that. But I see that as part of a pendulum that is swinging back and forth. I think that we are going back in the other direction now, that we’re going to see a lot more cutting-edge, meaningful fiction.

J: I go back and forth on this, on the political thing, because one thing that bothers me—even though I’m finding science fiction that I like and a lot of fantasy that I like too—is that there isn’t enough of it—SF especially—that seems to me to be engaging the situation that we’re in right now, like extrapolating forward from this. It might be that it seems too painful, because we’re actually living in a time when there are so many dangers to the earth in general that there are serious scientists saying that civilization could collapse within 100 years. I know that this is painful, and I know that it is also painful to have had all of these horrible things happen in the wake of 9-11...

On one hand I think that there aren’t enough writers who are willing to engage it because they don’t yet know how to engage it since they’re still absorbing what’s happening, on the other hand I think it’s a way an abdication of responsibility. If you are supposed to absorb the world and give your reflection, your view of what the world is all about, even if it is on a very personal level, then some of this stuff should come into play.
It's not that I think that people should have to go out there and do didactic pieces of fiction that reflect their political point of view or stuff about the environment, but when I read a near-future SF novel and it has some throwaway line about "oh, we solved global warming 20 years ago" or something I just don't buy it, because then the novel goes on with the same kind of fairy tale crap. It strikes me as being a failure of the imagination to some degree.

Of course, there are books out there that do deal with this. Even something like Robert Charles Wilson's Spin—which I thought was a good book, not a great book, but a good book—where it's not global warming, but it's outside alien interference, but it acts kind of in the same way; here's a crisis that we have to meet. Even that strikes me as more realistic than a lot of the stuff that's out there which is just pure escapism that might as well be fantasy.

It doesn't have to be overt. [Jeff's latest novel] Shriek, which is kind of the sequel to City of Saints and Madmen, has a war in it that incorporates a lot of the stuff that I've read about the war in Iraq, incorporates an event kind of like global warming transformed into a fantasy setting. No one has really noticed those aspects of the novel, which in a way is a good thing because it means that I was able to internalize these things in such a way that they didn't just seem as though they were stand-ins for stuff in the real world. But that's what I mean when I say that writers really have a responsibility to engage in this stuff. The more writing we have like that, the more relevant it is—not relevant in the sense that fiction has to be like non-fiction and has to have a purpose for being—the more alive in some way, more complex it will be.

SPM: On a personal level, I'm curious about the working relationship and marriage between two people involved in the fiction world. The theme of this issue is "our lives as fantastic as any fiction," about how we can learn to create our lives to be what we want them to be. And I thought that the two of you might have some insight into that?

A: Let me just say that I love my life. Every single day, new stuff comes up. I'm never bored, and I'm often surprised with things that happen. I've had the opportunity, from being married to Jeff, to travel all over the world, to meet all kinds of different people, to make friends everywhere, and to try different things.

Yeah, it's a lot of work, some of the projects we work on, sometimes we scream and yell at each other and all of that, but overall I feel truly blessed by the life that I have, and the things that we're able to do.

J: I think that first of all we compliment each other very well. It was different when we had two separate publishing companies; we had all these separate projects, because we wanted to keep a wall there. We didn't really combine our talents in the way that we are now, so it's been kind of revelatory over the past couple of years.

We compliment each other editorially because Ann is a great general editor; she'll read a story and say "this is what doesn't work here, here, and here," and I can do a good job using specific comments to give a general idea of what your strengths and weaknesses are as a writer. That line is kind of blurred now, because we've been working more closely together. For example, when we taught at [fiction workshop] Clarion, the past summer, we found out very interesting things about ourselves. Ann was offering these very specific, very incisive comments about the manuscript, and I was offering more general comments. We were able to mix and match our talents. But I think that one thing that holds true is that Ann is always a very clear and grounded person, and that helps me a lot... I get very passionate about things in a way that can be good but can also get me off track in directions that aren't productive, and Ann helps keep me grounded. We both push each other to do the best possible job we can on the project.

It's been good to work more closely together because it means we can get more done. I remember when I was doing the fake disease guide; Ann was helping with that but she had her own editorial projects. It was a great project, but I can remember working 16-hour days for 6 months to get that thing done. Now, even though we have more projects, we're working on everything pretty much equally, so there's more of an ability to not only do more but to keep the level of quality at the same high place that we want it to be.

I think that it's interesting that your issue is devoted to imagining your own lives, getting to that place to where you can have the realization of what you want to do or be. That's something that we've kind of been moving towards in the last few years. In February I went fulltime doing the writing and editing, and that was kind of the culmination of what you're talking about, having the belief, I don't know, not really the courage, but to throw yourself off a cliff and see what happens. Because for years I'd always been under the impression that with my personality type I needed to have a day job as an anchor and that I needed to be around people in the workplace. But what I found is that I could have done this much earlier and I would have been a much happier person.

In terms of our relationship and our marriage, we just compliment each other so well. I do have to say this though: I think that it's really good that I'm not married to another writer. One area in which I'm very competitive is that aspect, and I think that if I was doing poorly and my wife was doing very well it would be very difficult for me, and vice versa. It strikes me that people who are married and they are both writers have to be extraordinary people. While I try to do very well with the writing, I know my limitations when it comes to personal things like that. I think that is part of the equation of a successful partnership like this. Even if you don't always get it right, at least knowing what your limitations are, knowing
what the things are that you do that aren’t productive, helps you keep that under control. Like she said, we do argue from time to time, but most of the time we don’t. If you think about it, being under the pressure cooker of all these deadlines all the time, it’s kind of amazing that we don’t yell at each other more often. By accident of timing we have 8 anthologies coming out next year, which is absolutely ridiculous, but somehow we’ve survived so far.

A: I think that the bottom line is that we really respect each other, and we respect each other’s talents and skills. Regardless of the love and the friendship, we have that respect as well, which carries us through anything, I think. As long as we’ve been together—Jeff and I have been together for almost 20 years—, every morning I wake up and he does something new that surprises me. It’s wonderful, because it’s always new and fresh to me. I love being around his playfulness, his creativity. And I’m sure he loves my computer skills, because if something goes wrong, “Ann, come here...”—because that’s my day job. And I think what Jeff said about me not being a writer is very true, I think we compliment each other because our skills are very different.

J: We also have basically the same sense of humor, which is very useful. We both have kind of an absurdist point of view. As a reader on the outside, reading the anthologies, you don’t see the scar tissue that builds up. Because although there are great people in genre—there are great people everywhere—there are also all these roadblocks and obstacles and gatekeepers and people that you have to deal with who aren’t so great. So each book has all of this scar tissue behind it, of frustrations and irritations and things that didn’t go right or could have gone better...

A: But we do it so well that you never see that...

J: And we have that shared history of that, of all of those battles over the years. And they really are battles; sometimes it’s a real battle to get a book out, and not just get a book out, but to get it out the way that you want it to be. And it’s good to have a partner in that.

A: The two of us are in the same foxhole. 🦊

For more information about Jeff and Ann’s projects, see Jeff’s blog at www.jeffvandermeer.com
Many people who self-identify as or are actively involved in the goth/industrial/punk scenes are currently taking an intense interest in steampunk. The reasons for wanting to be a part of an emerging subculture when one already takes part in a previously established community are varied—some latch on to steampunk simply because it is seemingly trendy thanks to Boing Boing and Wired.com, and others develop interest as steampunk is an amalgamation of a vast number of cultural areas. Still others seem to be exhausted by regulations implied by their personal subcultures and find steampunk to be a breath of fresh air, so to speak. Having been subsumed by the mainstream by way of pseudo-goth chain stores in small-town shopping malls and pop bands masquerading as deathrock, current dark culture seems mass-produced and tired on the whole.

Not simply doom-and-gloom, goth’s original modus operandi asked participants to seek out nontraditional beauty and venerate it through music, literature, decorum, and community. Steampunk culture functions under similar guidelines, making it seem very attractive to old-school goths who pine for the days when the dark lifestyle was more than just a withering club scene. Right now, gothic venues, on the whole, play EBM and synthpop more often than post-punk or deathrock. The dark community is dominated by the 21+ bar or pub atmosphere as the main place of physical meeting, and that means that a lot of people cannot even experience the culture until they may be past the point of needing/wanting it. There are young steampunks, however, and because steampunks hang out online and on street corners and tea shops, not just in dark clubs, it seems like there is more of a place for a young, curious audience.

Once upon a time, if one wanted to dress in a gothic style, one did not have the ability to buy complete outfits off the racks of boutiques or from the ridiculous number of goth fashion sites online. One had to make one’s own look from scratch. Goth borrowed the anti-establishment do-it-yourself attitude from 1970s punk and post-punk culture, married it to the lush and forbidden hedonism of glam rock, and swirled in a liberal dose of Romantic fashion stolen gracefully from the Victorians. However, the average punk, indie rocker, rivethead, or spookykid these days is more accustomed to easy access to subcultural simulacra. Once upon a time, one could not purchase one’s lifestyle—one had to grow it. There was a certain sense of duty to one’s individuality rather than one’s scene.

Steampunk is the first subculture in years that invites this same sort of organic behavior. Because steampunk as a lifestyle...
Once upon a time, one could not purchase one’s lifestyle— one had to grow it.

is “new”, members have not yet decided on a specific dress code, attitude, type of music, et cetera (and we’re hoping it will stay that way!). There is a lot less self-justification amongst the ranks, and steampunks on average seem to be quite fine with the notion that one can be steampunk and goth, or steamrivel, or cybersteam, or geekystem. Steampunk as of yet is less of a scene and more of a community, a notion that appeals to a large range of outcasts, academics, garage engineers, eccentrics, and other such delightfully unique members of society. Its D.I.Y flavor captivates and welcomes, resulting in an ever-mutating heterogeneity. Steampunk “cred” is not achieved based on who one knows or how many records one owns or where one hangs out—rather, it is earned through positive participation and amelioration of the steampunk zeitgeist.

In April 2007, a LiveJournal thread was started in the steampunk community “anachrotech” in which a user inquired “In light of recent postings, when/why did the goths, of all people, take over Steampunk?” The replies erupted in a tempest of emotion, ranging from the personally offended to the equally curious. User “hollow_01” deftly wrote: “Let’s look at goth. Roots in 70’s punk rock? Check. Fascination with Victorian fashions and style? Check. An introspective subculture overpopulated by artist personalities with a love for industrial imagery? Check. Anyway, next time I meet with the Grand Council of Darkness and Cure Albums”, I’ll let them know that the great and evil plan to take over Steampunk has been leaked to the public by an outsider. Expect people to be moping on your lawn by midnight in retribution.” Goths and non-goths alike similarly (and cheekily) stood up for both steam culture and goth culture in tandem, explaining historical comparisons as well as implying that exclusivity was not going to be tolerated.

Some users, however, felt that steampunk and goth could not exist hand-in-hand, or that steampunk was just shaping up to be a brass-coated fourth-wave goth. Though goth and steam seem to have sprouted from the same desire that educated individuals possess to both fit in and stand out, steampunk is certainly a distinct community with its own aesthetic and unbridled behavior. One illustration of the two subcultures mingling in the same space but still maintaining their own diversity occurred in May of 2007 in Portland, Oregon, at Convergence 13. Convergence is the largest goth meet-up in North America and it takes place yearly in different cities. Saturday evening of the event this year became an unofficial steampunk party, likely brought on by the planned appearances of Abney Park on the mainstage and Vernian Process behind the CD decks. The dissimilarities between goth garb and steam gear worn by participants were obvious, though both groups were dressed to the nines in jewel tones. The steampunks wore clothing they had predominantly manufactured themselves or purchased from small businesses online, and many of the unaffiliated goths dressed in classic neovictorian gowns and suits with few modifications, or typical Lip Service and Tripp NYC outfits. Noticeable as well was how fluidly the steampunks gravitated toward each other—for one, the entire participating company of SteamPunk Magazine managed to congregate on the stairs for photos, having never met before and with little advance warning! The goggled community at C13 seemed relaxed and polite, and pressed up against the stage eagerly during the performances, shying from the bars in order to dance.

Sunday brought the second major appearance of steampunk subculture at Convergence 13—an impromptu busking session outside the event's hotel. Paul Mercer of Faith and the Muse and The Ghosts Project played viola side-by-side with Nathaniel Johnstone, violinist/guitarist for Abney Park. They were joined by Magpie Ratt on accordion/vocals and a small company of doumbeke-players, bellydancers, photographers, and other such individuals. The event was nearly unorganized and none of the musicians had practiced together before. However, there was absolutely no debate about what might constitute proper music—they simply unpacked and performed for the gaggle of goths waiting for the bus and unrelated bystanders. This exhibition of pure D.I.Y amusement is exactly why steampunk is so alluring: whimsically, it existed for its own sake within a larger cultural space.

Despite events like C13 and steampunk’s current popularity, the emerging community often seems a bit divided and confused. Some of those following the culture closely consider themselves lifestylers in one way or another; others want only to adopt a steampunk-flavored persona to use during play. Everyone seems a bit unsettled, as if no one knows quite what to do next. No rules means creativity blossoms with wild abandon... as does naysaying, backpedaling, and neovictorian flouncing. Individuals looking to join the goth scene are lucky in that it is broken-in like a comfortable black velvet couch—it is easy to find a mentor or someone to emulate. Steampunk newbies usually seem to be squirming in their proverbial wooden chairs, not quite certain where to begin, expecting to have their niche neatly parceled out, and finding themselves lost. Lifestyle quickly tire of the same curiosities from the initiated, and there can be a fair bit of tension in online forums over politics and protocol—no different from the goth or punk scene, truly.

Still, steampunks of all kinds press on. By no means is the steam community a superior subculture to goth, punk, indie rock, et cetera—it is still a child and will need much nurturing. People from all other walks of life are more than welcome to assist in its growth. Come what may.
Once there was a city.

In this city there lived a Man and there lived a King.
The Man did not know the King was a king.
The King knew very well the Man was a man.
The King had taken with ease what the Man had worked hard to earn.
The King had stolen the affections of a lady. Namely, the Man’s True Love.
The Man did not like this at all…

“Nine-and-forty hands high this’s some balloon.”

It wasn’t the sort of crowd you saw at the lighter-than-air fair. First,
well, there was me, all but done up in a bow, aristocrat and made
more fool with my need. Secondly the legions like me; all whiskers and
waistcoats, a flurry of high-order and little compassion, we knew what
we wanted, we bought it often, we sold it oftener. This air-business had
a transference out of the normal realms, near the wasteland; nobody
knew what was going on, all you could sell in a sack with a ribbon
on top. Long gone from the spheres of churchyard blasphemy and into
what we knew how to build with our good two hands, we knew how, we
could fly, suffer that you fucker…

The Man challenged the King to a fight because he was very cross.
This was not a fight like you would have with your brother or sister,
because it was a fight with very strict rules that had to be obeyed (but
otherwise it was it was much like what you would have with your
brother or sister).

The King accepted the challenge because above all things the King
was vain and the vain often do silly things.

The Man asked the King where he would like to have the fight (the
Man used the word ‘duel,’ a word which is used to make fighting sound
much nicer than it actually is). It was one of the rules of a duel that he
should.

The King answered the Man that he would like to have the duel in
the air, in hot-air balloons.
She was... Well... She was all that I did it for. I had adored her for so long, under so much grief of waiting; across crowded halls and laden tables my desire made the air thick with potential. Just to speak to her.

Say anything, anything at all, you coward.

And I did, for all my worry I didn't fall on my intent; my heart melted at her attention and poured out my mouth. Words and words and words, all there ever was to be had I gave to her in the shape of those tiny, ugly little constructs. And in turn I was all but broken by the fact that she paid any heed to them at all.

It's easy in retrospect to say when it was that you knew; it was there and then, I won her at the first.

Well, at least that's what I thought at the time.

Among all the dancehalls and all the masques that the city bled like blood there was no one competing for her, they had all repented and resigned to me. My method was slow and ferocious, I would suffer no fool to waste her time but me.

But then, that was my weakness. Too slow, I waited too long. Then he came along.

Bludgeoning his way through our society; two clubbed feet, he was a disaster waiting to happen that never did—he blockaded and starved her to the death of my adulations.

Named on account of all his victory, he was the sort who knew no bounds; all he could fetch (and was worth fetching) was his for the game. A game indeed, for competition, a hunt: Ashbury Paralda. It was all I ever needed to know about him...

The Man agreed to the King's idea because those were the rules, and if you don't agree to the rules then the game isn't fun anymore. The Man also agreed to it because the King took a lot of pride in balloons, and the Man felt if he could win a contest involving balloons, then the King would be quite shamed.

And so the Man and the King agreed to fight with pistols, in the air, in balloons...

And suffer is just what I did. Paralda knew his way around those blessed, bloated man-lifters in a way that made us seem the ignorant meat-weights we were. His knowledge was supernatural in precision; those that didn't greet his gospel with open arms took it for sacrilege. I counted him heretic alone...

The King was sure he could win the duel because, for one thing, he was very, very good at flying balloons, but above all he knew that he was a king, and he knew that kings always win. This, of course, was in the days before the French Revolution.

The Man was not quite so sure he could win the duel, but he tried regardless. He wanted to win back his True Love. He knew that he fought for love and knew that those who have love in their hearts must always triumph. This, of course, was in the days before people knew what they were talking about.

The King did have the upper hand though, for he was a special sort of king. Not the king of France or Spain or Africa, he was the king of the air and the wind; his throne was all the sky.

The day had been arranged and both the King and the Man had arrived. The Man had studied long and had studied hard about what he needed and had found himself a balloon in a hurry, for he had spent most of his time building two exceptional pistols.

The King had spoken to the winds and told them what he wanted. He had ordered a balloon to be made for him because he knew exactly how it should work. And though I do not think his pistols were nearly so fine as the Man's, he did carry a very peculiar sword.
The King and the Man stood a long way from each other, near their balloons: the Man had a very serious expression on his face, while the King looked unconcerned. And this made the Man more upset than he already was…

Set, we meet, I’ll mince him good.
   Ferocious
   And
   Savage
   And
   Brutal
   And so filled to bursting with all the grief of all the love I have the way I do. If... if he even grazes me, I’ll break open at the seams like this heaven-rising bell above me (like it creaks—the way it wants to). But no! No, I’ll break him down on the anvil of all I know.
      (But what if what I know is wrong?)
      It isn’t!
      (What a pathetic child I make, what if you die?)
      Then I’ll die in love.
      (Ha! What if he loves her more?)
      He doesn’t!
      (What if she doesn’t love me?)
      Shut up!
      (Can I know? Can I prove how she feels?)
      Shut up!
      (What if all you’ve done is for nothing?)
      Shut up…
      (Because whether you win or lose, you can never, ever know, not really.)
      (It will be a tragedy.)
      (And I will be the only one to blame.)
      (And I will be the only one the tragedy touches.)
      (And it will be a tragedy.)
      (Such a tragedy.)

      (Stop your sniveling! Harden your face! Make ready! Are you ready?)

      ...
      (“Are you ready?”)

      ...

      “I say sir, are you ready? It is about to begin.”
      “Yes, yes of course I am ready” I say, I am not so far robbed of my tenacity and desire, or the providence of my reason to forego this
struggle. This will be decided in the traditional way: I will murder him through the body to stop his murder through my heart, and we will do it in the air.

We rise aloft, so high the laws of the city don’t touch us, can’t. We’ll make our own, filled with lead and hate and our wretched resolves. So far away, but blowing ever closer; these pistols with their grinning, toothless mouths are the heft and the heave of all my heart’s will.

So still,
The world down there is so still up here.
I can hear the beat of my heart. In my throat. And in my temples. It is a tattoo, it is wild and hungry. It is blackening me. But I see, I see the range, I gauge it right—these searing wolves in my hands leap, cocked and made ready I let them loose.

ONE.
TWO.
Misses both; what’re the chances?
“Feed us! Feed us!” They howl.
But I see him aiming now, and I am afraid. Now, now it all ends.
He fires
...
Wildly and carelessly, I think. I think I feel empty humility swelling in me; this is not compassion I have known, I...

No!
He is coming closer and I see the malice in his bearing, I see something in his hands. That gleaming, glimmering twist of metal, what is it?

My god. It’s so beautiful...
His clubbed feet are no encumbrance here; his hair is gold in the sunlight and his coat billows in the wind.

He is a bird (so fair shaped)
And an angel (so cruel of eye)
He is the king here.

That sword, oh god, that sword is his name made steel. And it is so powerfully beautiful.

“Feed us! Feed us!” I try, I scream in effort. Jesus save me from this interminable, fumbling wait.

Fed,
Cocked,
Steady hand,
Look up,
Aim!
Where...is...he?
There! Along the wind—stepping toward me, with nothing but sovereignty in his eyes and that sword in his hands.

“I’ll not give her up to you!”
I do not care what he is or where we are, and so let loose a wolf at his face with all my intent. Blood breaks ranks along his head where an ear used to be. But all the same he falls toward my seat here and we fight. And we fight for all we’re worth and that sword moves like a song but it can’t move here and it can’t move there because it’d cut us well from this perch and all the wind-walking you can do won’t save you from a great big basket this size gripping you all the way down.

His extra ballast brings us ground-ward but not fast enough to stop this violence, so I bite and throw my limbs at him and cry and scream. And scream. And watch my hand fall, severed. Four fingers and a thumb. So unlike the bird it imitates...

AND SO BOTH the King and the Man fought. It was not nearly as nice as the word ‘duel’ made it seem. And though the King was peerless in the sky, the man attacked him in the manner of the creature that his love made him—this made the duel almost, but not quite, even.

But, the Man’s balloon was poorly designed, and so failed as the two fought, and all the powers that the King had could not save him whilst dooming the Man and so he called to the winds to help them both live².

And when they landed in a tangled mess, both rose to find a crowd about them, but not one face there looked remotely like the Lady they fought for, because in fact, she wasn’t even there.

You see, the Lady was truly flattered by the attentions of both the King and the Man, but just as much, she was sure she was not a prize to be won or lost. She would no more favor the winner for his martial prowess than she would tend to or mourn the loser for his masculine failings. Her mind and heart were her own; the passion that drove them to violence was not one mirrored inside her. Indeed, rather than watch the skies, she had decided to attend the playhouse instead.

And when the two duelists discovered this, neither cared particularly for her afterward...

This passion that drives me is far from gone.
After so much work, my hand is returned, but of new design. Glimmering and glittering now, an echo of old defeat. Hand of my hand, built in the shape of the flesh but finished in metal; turning by knowledge and gear-knuckle, gibbering electric. It channels the output of my lusts as voltage through the very air. The air I know that lives in him. I will find him.

I will make him return the love that I lost.

²This is what we call Irony, which is very complicated, and never very useful, but tends to happen in stories like this.
While meditating amidst scraps of copper, strong chemicals, and the Internet one day, I chanced upon a classroom demonstration of turning a penny into gold.

Okay, so it’s not really “gold”, but brass, specifically cementation brass (akin to calamine brass, for the research-oriented). Few metals scream “steampunk” the way that brass does. Chemically inlaying a brass design into copper, or simply turning those goggles you made from copper plumbing into brass, is nothing short of alchemy—and is fairly easy to accomplish in the average kitchen!

**MATERIALS:**
- Copper: sheeting, plumbing fittings, etc.—as long as it is in a form that can be cleaned.
- Zinc: harvested from alkaline batteries (using a tubing cutter, see the website), roof flashing (if you live in a wet climate), or from a marine supply or stained glass shop.
- Household lye (sodium hydroxide): available in hardware and grocery stores, or from the neighborhood meth lab.
- Hot water: nothing fancy here.
- Resist material of your choice for imparting a design: see Steampunk Magazine #1.

**TOOLS AND SUPPLIES:**
- Personal protection equipment (goggles, rubber gloves).
- A glass dish: a stove-safe Pyrex pan is best, but a baking dish will work.
- Tongs or chopsticks (depending on the size of your project).
- A clean scouring pad and cleansing powder.
- A stove or hotplate.
- Paper towels.

**STEP 1**
Wearing clean rubber gloves, get that copper as clean as you can get it with scouring pads and cleanser. You want bare, clean metal with no grease or fingerprints. Rinse it in hot water until it is free of any cleaning agents. You can give it a wipe down with rubbing alcohol if you want. The end result should be copper with no varnish, grease, nor oxides left.

**STEP 2**
If you want to put a design on your copper, mask off everything that you don’t want “brassed”. Choose a masking material that can withstand a hot alkali solution for at least one minute, because we’re going to be boiling it. In some cases you might reverse Step 1 and Step 2, depending on how tough your masking agent is.
**STEP 3**

While wearing your eye protection, place a bit of zinc (battery paste, small bits of flashing, etc) into the glass dish. You need only as much zinc as you’ll be plating on, so a few grams will suffice on all but the biggest projects. Add some household lye crystals and enough hot water to the dish to completely cover your copper item. I use about a tablespoon of lye to a cup of boiling hot water. This solution is quite caustic, so don’t drink it, get it on your skin or mucus membranes or eyes or hair or anywhere on your clothes, your pets, etc.

The hotter the solution is the better it will work, hence my preference for the stove-top Pyrex dish (be warned: a baking dish will shatter if placed on open flame!).

**STEP 4**

Place the squeaky-clean copper into the dish of the lye/zinc/hot-water, and watch in amazement as a silvery coating of zinc gets deposited over all exposed surfaces. Pretty neat huh? The longer you leave it in there—and the hotter the solution is—the thicker the zinc plating will get (up to a point, anyway). After 1 to 5 minutes it’ll probably have all the zinc it’s going to need.

**STEP 5**

Remove the zinc-plated copper from the solution with chopsticks or tongs or a plastic spoon, whatever works for you. Treat it a little gently so as to preserve that lovely zinc coating. Rinse the piece off in running water until all that nasty lye is washed off.

**STEP 6**

Time to make brass happen! Note: Depending on the masking material used you might want to remove that now. Depending on the flammability of the mask, it may emit vile/toxic vapors when heated, and surface discoloration can result from heating/burning it. If you used a lacquer to mask your design, you can probably apply the appropriate solvent to remove it before heating, but be sure that the solvent has completely evaporated before heating the copper. If you’ve used wax you should probably remove any excess by gentle heat before holding the copper over a stove (flaming wax=fire hazard).

You will heat the plated copper piece on a stove or hotplate (or, used carefully, with a torch or heat gun). The recommended method is to hold with tongs and pass it rapidly and repeatedly over the flames to get it evenly heated. You don’t want it red hot, but it does need several hundred degrees for the zinc to diffuse into the copper. Keep an eye on your work, and you will see the brass magically appear as the zinc oozes into the copper. Once the surface zinc is absorbed, *immediately cease heating!* Too much heat makes the brass go away again (that darned zinc just keeps diffusing into the deeper regions of the copper and the air itself).

Set the piece aside to cool on a trivet or drop it into a pan of water. *Congrats, you just made brass.*
LEFT-OVERS

The lye solution can be stored in a glass or plastic bottle for use on your next creation (just be sure to label it clearly). You won’t need to add more lye, but you should replenish the zinc as it is consumed. Use care when reheating the lye solution though: I discovered that microwaving it in a mason jar is a very bad idea, since lye collects on the side of the jar creating a very hot ring, and the jar will break (my jar broke cleanly above the level of the lye solution, but you may not be that lucky). Again, a Pyrex pan is the best way to go for reheating the lye solution.

On the other hand, the household lye is cheap and designed (nay, destined) to be poured down the drain: it is sold as a drain cleaner. Dilute it with lots of water and carefully pour it down your kitchen drain. This may sound very, very mean to Mother Earth, but the action of household lye on the greasy sludge in your kitchen drain is very benign: it reacts with fats and oils (in a process called saponification) to make soap, a very low impact effluent. Alternatively you could just decide to make some soap (seen “Fight Club”?), or the diluted lye can be neutralized by carefully titrating with acid (hydrochloric acid + lye = salt water + heat), though this could actually increase the total energy/chemical footprint rather than reduce it (e.g. the grease in your drain is already there).

GET GROOVY WITH ETCHING

Say you’ve just made a nice brass cog design on a square of copper. Want to jazz that up a bit? How about etching the outlines of the cog, or adding a background pattern? You may do so, whether using acidic or galvanic methods. For galvanic etching, see SPM#1. For acidic, refer to the nearest internet.

PATINA NEVER SLEEPS

You could make a drinking game out of “The Antiques Roadshow”, downing a shot every time you hear the word “patina”. But seriously, patina (corrosion) on your copper or brass handiworks adds a nice air of historicity (props to Phillip K. Dick, wherever you are).

My all time favorite ageing treatment is “Liver of Sulfur”, AKA “sulfurated potash”, available from craft supplier or jewelry supply shops (I found mine at a funky place called “The Bead Merchant”). Available as a limited shelf-life liquid or in storable dry crumbles, you put just a pinch of the dry stuff into a cup of hot water then dip or brush it on copper, brass, silver, etc., and it darkens the metal dramatically. Copper can be aged from a pinkish ochre tint through deeper shades of chocolate to a dark bluish black in just a few seconds. “Liver” is a very striking, permanent, and fast acting surface treatment.

Some other patina suggestions:
- A strong solution of Miracle Grow and water will produce a green patina overnight. Use the sand method above, or just brush it on around the areas you’d like to show their age.
- I’ve noticed that the brass electrodes in my glass enclosed Jacob’s Ladder (infernal device) turned green after one night’s use. This lends me to suspect that ozone would be an inexpensive source of green patina. Ozone generators, anyone?
- Some swear by using urine, human pee, but I don’t. It’s nasty and I won’t go there. I don’t think you should either.
- Man’s oldest and dearest friend, fire, can produce interesting effects and on most metals (and the people that they touch). Polished copper shows off wonderfully colorful heat distress. Be careful, though, not to bleed your brass away: too much heat can turn your latest cementation brass design into plain copper faster than you can say “NOOOOO!!”!
- The www.finishing.com website has a lot of information on patinas, plating, and that kind of stuff.

FINISHING UP

Experimentation in open air metal transmutation, etching, and surface finishes can be used only for good or evil, but be careful. I’ve not covered all the usual safety warnings (ignored them for the most part, I have), but you hear them all by watching a few “Beakman’s World” re-runs, consulting MSDS sheets on the materials involved, and so on. Of the chemicals discussed, the muriatic acid, the lye, and the “Liver of Sulfur” are probably deserving of the most respect, though the ammonia is no treat to spend time with. Use personal protection equipment, common sense, good ventilation and, if possible, work with a friend.

Good luck, and go make something interesting!

(see http://offlogic.wordpress.com/2007/09/20/steampunk-and-the-golden-penny-effect/ for some background on this.)
“Then I heard every creature in sky and on earth and under the earth and in the sea, every beast in the universe, cry out: ‘To the one who sits on the throne who will answer our cries?’” (Revelations 5:13)
New York City, October 3rd, 189?

The howls of the Catastrophone exploded through the cluttered free clinic, sending musical shards flying out the door onto Delancey Street. Columns of roiling steam poured from two of the instrument’s many cannon-like pipes, engulfing Professor Calamity and hampering his search for a makeshift cricket cage.

Neal List, knowing that his voice would not be heard over the roaring and clanking of the instrument, threw his recently pilfered copy of the *Herald* down and marched through the artificial fog towards Pip, the instrument’s caretaker. Through his welding goggles, Pip saw only the white of Neal’s mohawk, not the heavy meaty hand that cuffed him so hard his teeth clattered. Pip turned one of the brass valves, smarting from the ex-steelworker’s blow.

The instrument shimmied, sputtered, and finally became silent. Neal flopped back down onto his orange-crate and picked up the funnies again, while Calamity continued to search, stepping over a murky puddle of discharge.

“It’s madness, this cricket idea of yours,” Pip said, turning a few more knobs and locking a lever in place.

“Madness?” the Professor asked, turning to gaze down at Pip, “What would you know about madness? Do not forget, my young Pip, with whom you are conversing. I have not only studied madness, I fell in love with it.”

The professor gave a slight bow in the direction of Mathilda, who was applying arsenic to her face on the other side of the room. Calamity had worked for years in the screeching bedlam of Bellevue as an alienist before moving to the Lower East Side, squatting the free clinic, and forming the Catastrophone Orchestra. His lover and main operator, Screaming Mathilda, was certifiably insane.

Pip knew all of this, but he also knew that the Professor’s idea was nothing more than sheer lunacy.

“Look, the catastrophone operates at ninety-five PSI, minimum. Those pedal steel drumotrones we just built? They had to be increased just so they could be heard above it. I had to double up the chains to get enough velocity…” Pip trailed off as he tried to re-zero a cracked gauge.

“Yet an angel’s sigh can be heard across the world. We need something else, something subtle … a sound to add to your wonderful machines. We need something organic. To fully capture the music, to transform the listeners…” Calamity said, now searching his empty opium vials for an appropriate cricket receptacle.

“Listeners would be nice,” Neal said from behind his paper. The others paid him no mind.

“It’s just not mathematically possible, Calamity,” Pip said, retrieving a mop to slop up the mess from the machine.

“Mathematics! That is exactly the point! Barbs divide the length of the golden cricket’s back leg. With proper breeding, an individual
with enough foresight may breed crickets that play notes. Specific, separate, and discrete notes. There is an exact and well-known formula; high temperatures produce specific leg rubbings. This is why men who work the land can determine the temperature in the fields on the basis of the crickets’ song. Don't you see, my boy? We can heat up our specially-bred crickets to play anything we like! Think of it … think of it as the first organic organ!” Calamity exclaimed, knocking a tin of twice-used coffee grounds onto the threadbare rug.

Mathilda checked her midnight-blue lipstick and rose from her razor mirror. She ducked under one of the Catastrophone’s vents, crossed over to Calamity, and gently touched his bony shoulder.

“These plebeians have no understanding of art, but you, you believe in me, my dear Mathilda,” he said, pulling her into his trackmarked arms. She purred and reached past him, lifting down a black beribboned hatbox and handing it to him.

“I don’t want to keep the Society waiting.”

“Brilliant!” Calamity said as he took the box, “I’ll go fetch some rolled oats for our little insects; I’ll meet you on the corner.” The doctor dipped into Neil’s vest pocket and removed a few tattered dollars.

“Mathilda, you know he’ll never make it to Canal Street. There are at least three poppy parlors on the way to the Chinaman’s pet shop, ” Neil said, without looking up from his paper.

“How much did he take?” Mathilda asked.

“Most of the tobacco money and a bit of the food too,” Neil answered.

“Then you make sure he comes back with at least half. You know that the Doctor sometimes forgets that the rest of us need to eat.”

Mathilda navigated her way past the urchins sharing a cigarette on the stone steps of the Henry Street Settlement. Inside, the foyer smelled of unwashed diapers and five-cent cigars. She stole a glance at a bulletin board advertising English classes, a lecture by the infamous anarchist Johann Most, and free tuberculosis testing. She walked past the kitchen where sincere reformers worked to prepare the evening’s turnip stew. The library door was open, and through it she heard the voices of the Society debating.

“Greetings, Mathilda! We were just speaking of the incident at Coney Island, with the butcher and that poor elephant,” Father Martin said, as he rose from the table.

If the Society had wanted a leader it would have undoubtedly been Father Martin. His duties caring for the poor as one of the Franciscan order had allowed him to move in many circles. It was from these different spheres he first drew together the Society for the Enrichment of Animal Welfare, which was commonly referred to as “the Society.” When the Society had first begun three years previously, many more people had attended the monthly soirées and lectures, but it had in recent months dwindled to a monthly gathering of no more than a handful of like-minded folk.

“How much electricity does it take to kill an elephant anyways?” Mathilda asked a rotund man who sat by the window eating a cookie.

Along with Mathilda, the pot-bellied Dr. Tarr had been there since the beginning, when the Society was still idealistic and fired by dreams of action. Dr. Tarr, ever the martyr, had continued to put out the society’s gazette long after the subscription rates had dropped. He was always the first to arrive to the meetings and he always brought lemon-seed cookies that his wife had baked the night before. Clearly, Tarr had married a woman who could indulge in his love of both deserts and stray cats. The man was a hard worker and he was the last remaining full-time animal doctor in Manhattan.

“Mathilda! That is dreadful! Who cares how much electricity? It’s terrible,” said Mrs. Halsworth, “and it’s in all the papers and, why, no one’s lifting a finger. I heard the mayor was even there!” Mrs. Halsworth was the wife of an investment lawyer. She used as much of his money as she dared to care for ex-racing horses on their property in Tarrytown.

“Do you think they ate it, after they cooked it?” Mathilda asked, folding her hands in her lap.

“I must say! The things that pop into your mind.” Halsworth shook her head, “You know, meat-eating is criminal. It ought to be a crime.”

“Or at least a sin,” Mathilda replied, looking at the priest.

The conversation died as Antonio—the society’s newest member—entered. All eyes were on the balding Italian, who quickly took his seat opposite the Franciscan. Silence filled the book-lined room.

“Antonio, I was very sorry to hear…” Halsworth broke the silence.
The rest nodded in agreement. As if on cue, Antonio started uncontrollably hacking into his stained handkerchief.

“Thanks, it’s alright. So what were you all talking about?”

Father Martin recapped the discussion and the news article on the electrocution of Topsy, the elephant at Luna Park.

“So it would seem, Mrs. Halsworth, that technology is not going to be the savior of animals, as you have so often suggested,” Dr. Tarr said.

“Nonsense, Edison is a lunatic, an aberration. In the future there will be no need for animals to be eaten or worked to death,” Halsworth replied.

“There will always be a need for animals to aid man in his labor,” Tarr said.

“How can you say that? Why, it goes against progress! You already see the mule teams on the Eerie being replaced by steam engines. And last summer in London, I rode in a steam carriage. It was such fun to whiz about the streets in it. The museums were also very impressive … you should really go sometime. Now where was I?”


“Yes. No. Oh yes, I believe the twilight has already begun for beasts of burden and the animals of the field. Steam tractors will liberate the draft horse and the tired donkey,” Halsworth said, building a head of rhetorical steam.

“I don’t believe all of that, but you must admit there will always be a need for meat,” Dr. Tarr said.

“Need! Meat is a murderous abomination. Soon, we will all be like the Japanese, eating only healthy vegetables. When I was in Tokyo on my honeymoon, the food was simply amazing. They did eat fish, but most of it was rice and vegetables.”

“Murder? Father, have you ever heard such nonsense? The study of nature is the study of violence. The lion eats the gazelle, because food is food. We must eat to live. I cannot agree that there is anything wrong with eating meat, so long as the animals are treated humanely. Let the chicken have a good life before she is put in the pot, I’ve always said. And that has been my work for all of these years. No one loves animals more than me.”

“Do you often eat your loved ones?” Mathilda asked.

Halsworth continued to protest against meat and for the redemptive power of technology while Dr. Tarr offered up a lackluster defense between bites of cookie. Mathilda half-listened, tossing in a verbal bomb every now and then.

Father Martin had heard it all before: the conversations, the debates. He longed to free animals, and he had once hoped that his little society could be an agent in that struggle to advance mankind. His faith had always given him comfort. He thought fondly of Saint Francis. How that holy man had extended his love to all the beasts, how he had reached communion with both God and His creations. Yes, that would be an excellent beginning for his sermon, he thought.

Martin had yet to write his sermon for St. Francis' feast, which was the following day, and had hoped that the society would bring him inspiration.

“I am sorry my friends, but I must go, and prepare a sermon. You are welcome to continue your conversation. We have the room for another hour,” he said.

Before he left he looked over at poor Antonio. He had known the man for perhaps six months at most, but he knew that Antonio was a good, solid friend of the animals. He was more than a little sad that the Italian stagehand was dying. He wondered how many more meetings Antonio would be able to attend as he looked over and found him trying to stifle a cough.

“Antonio, would you like to accompany me back to the rectory, for some fresh air?” Martin asked.

None of the others heard Antonio’s response. He simply rose and followed the priest out; the sounds of the society’s argument followed them down the hall.

Father Martin was feeling good about himself. He had told Antonio all the right things, given him a speech he had honed in his years of visiting hospitals and sick beds. He had done his good work for the day and had more than a start on his sermon. It was always the most interesting sermon of the year.

“Well Antonio, I trust we will see you next meeting.”

Martin shook the hand of the dying man, who would not let go.

“Father … there is something weighing on me. I am confused.”

“I believe that is natural, Antonio. But you must not fret; you are in God’s perfect grace.”
“Thank you. But what I am confused about is how to make a real impact. You started the society; it must have been a disappointment to you. For two years, nothing has changed, even fewer people come now. Even Professor Feather hasn’t been around,” Antonio said, wringing his well-worn hat.

“An impact? What kind of impact? I’m afraid I don’t understand.”

Martin felt something behind the man’s words, something dark that made the hairs along his arm rise. He could not quite grasp the source, but something made him terribly uneasy.

“What are you planning Antonio?” Martin whispered.

“I have a bomb.”

The priest instinctively took a step backward, almost slipping off the curb.

“Not with me, Father.” The Italian smiled.

Placing his cap on his head and standing straighter, he continued, “The theater may have killed me with its chemicals but my life will not be wasted. No siree. I got most of it worked out.”

“You can’t be serious,” Martin said, grabbing Antonio’s sleeve and pulling him closer.

“Deadly serious, I assure you. There is nothing you can do to stop me. I have already let my room go and I’m going to get my bomb. The only question I have is where I should go.”

“Go? Perhaps we’ll go inside and talk.”

“You can’t be serious,” Martin said, grabbing Antonio’s sleeve and pulling him closer.

“Deadly serious, I assure you. There is nothing you can do to stop me. I have already let my room go and I’m going to get my bomb. The only question I have is where I should go.”

“Go? Perhaps we’ll go inside and talk.”

“The cruelty is out there, Father,” Antonio said, waving his arm to the city. “There are so many wrongs. Helpless beasts who never asked for any of this. You have been involved in the struggle longer than I have. Longer than all of them. I am not looking for your blessing Father, just point me in a direction where my death will have the most meaning. Relieve the most suffering. That’s what we all want, we all do it in our own ways. The doctor, with his practice helping mend poodles and Mrs. Halsworth with her crippled racehorses, Mathilda … well I’m not sure what she does. You with your words. And me with…”

“A bomb?”

“Yes.”

Martin didn’t know what to do. If he went to the police, Antonio would surely be gone before he returned. He might even be forced to do something dangerously foolish. It was true, Martin didn’t know this man well but he believed he could change his mind. He just needed more time with him.

“It is clear you will not help me.” Antonio began to walk down the street.

“Antonio, wait. Where are you going? Let me come with you,” Martin pleaded.

If nothing else, Martin thought, Antonio wouldn’t blow himself up with a priest at his side.

“I kept notes, you know. Don’t say much at the meetings but I hear.”

Antonio pulled out crumpled articles from the Society’s bulletins.

“What is that?” the priest asked.

“Places you all talked about. I’m going to check them out. Find where I can do the most for the animals. If you want to come, you can, maybe you can help me pick the best one.”

“Or none,” Martin silently added to himself.

“It’s too bad Dr. Tarr isn’t with us,” Antonio said, stepping carefully to avoid a half-congealed puddle of blood.

Martin’s response was drowned out by the steam horn which bleated loudly from the frigate sliding out from the Chelsea piers.

From twentieth street all the way to the forties, snaking along the river was New York’s ever busy “meat-packing district.” Cows from Chicago were chased down chutes on the piers bumping into guinea fowl from St. Lucia. Slick urine and feces-covered ramps crisscrossed the waterfront, connecting dark windowless sheds. The animals were herded into these perverse arks, most often at night, their last earthly communications echoing across the water to the Palisades. A few blocks further, towards the interior of Manhattan, were the meathouses. Horse-drawn trucks dropped off full carcasses to be alchemically transformed into dinner chops. It was through these gory alleys that Antonio searched for the LaFontaine Brothers.

“How are we going?” Martin asked, horrified by two strays pulling at an unidentifiable piece of forgotten entrails in the gloom.

“Here we are,” Antonio said as he pulled himself onto a loading dock.

A man with the body of an ape and the face of child met Antonio on the deck. He casually carried a fifty pound block of ice on his toweled shoulders; his bare chest was streaked with blood. The butcher dropped the ice and held out his hand to help heave the priest onto the slippery deck.

“You are very welcome, Father,” the man said in a heavy continental accent.
“You are French?” the priest said, trying not to stare at the man’s bloody torso.

“Belge actually,” the man replied, following the priest’s eyes with his own. “Sorry. Aprons soak up too fast and they cost ten cents a cleaning. It’s easier to just wash off. So you come for the Cevaux piggies? Yes, men of taste. Better to prepare it yourself than to have it at some mangy restaurant, no?”

Antonio and Martin ducked under the leather flap separating the dock from the interior. Martin was shocked by the number of laborers moving around in the gray-tiled hall. Gleaming knives, powerful cleavers, and flexing saws moved in silence like the choreography of a Bosch scene. Martin followed the hulking Belgian across the well-lit slaughter floor to a metal staircase. The Belgian stopped and grabbed a sputtering hurricane lantern.

“Watch your heads, yes?” he smiled, descending the wrought-iron stairs.

Martin grabbed Antonio’s arm and pulled him close whispering, “What are we doing here? I have read the article too, you know?”

“Have you ever seen it? I mean not at a restaurant with orange sauce, but actually seen it?” Antonio answered.

“No,” Martin admitted, watching the glow of the lantern dance further away into the depths of the building.

“Neither have I. Let’s go.”

The cellar was low and the men had to crouch to avoid banging their skulls on the exposed beams. The sound was disturbing—whirling gears and crushing noises filled the low basement as if a giant was grinding the bones of unlucky Englishmen to make his bread. The temperature in the cellar was at least twenty degrees higher than on the ice-covered cutting floor.

In the back were rows of small cages filled with bloated piglets. Their heads tethered upwards as if they were singing in a ghastly choir, though no sound escaped their throats. As his eyes adjusted, he began to see the clunking contraptions with flapping bellows, the spinning gears crushing glass, the tangles of copper tubing that extended to an iron shelf of upturned bottles with French labels. The entire mechanism was powered by a small glowing boiler that sat like a burning egg under the mechanical vulture.

“The light is bad for the meat, yes? Many others take shorter cuts, keep them exposed. Many shorter cuts, but we are Belge. This is the real Cevaux piggies,” the Belgian said, like a proud parent showing off his son’s trophies to a houseguest.

Martin knew what those tubes snaking down the pigs’ throats were for; they were filled with some type of liquor, usually anise-flavored but sometimes something more exotic like chokeberry.

Martin could no longer stand the sight. He turned, looking for the stairs, toppling something that clanked and smashed on the stone floor. The huge Belgian bent down and picked up a brown shard of glass.

“Yes. See we only use brown or green glass. You know why, yes?” he said smiling his idiot’s grin at the priest.

“I think we have seen enough,” Martin said searching for the stairs in the suffocating darkness.

“You feed them broken glass so they bleed internally, so the liquor saturates the fatty tissues,” Antonio answered, from behind Martin.

“Yes. But why do we use colored glass? It’s more expensive. Take a guess,” the man said, grabbing Martin.

“I assure you I have no idea.”

“So the cook can find them. It wouldn’t do any good to serve you a plate of Cevaux A L’Orange with bits of glass would it?”

Outside, Martin drew in great shaking breaths of the cold air. Even the putrid river air felt refreshing after being in the basement. He watched as Antonio shared some final words with the butcher and handed him a few coins. From where he stood, Martin could see the meat merchant was confused and trying to convince Antonio to at least take some sirloin for his money.

Antonio finished his transaction and rejoined Martin.

“Seeing is indeed different from reading about it,” Antonio said offering a cigarette to the shaken Martin.

“Yes. It was worse than even Ms. Halsworth’s article about it. Just to see it … no wonder she is a vegetarian.”

“Yet our comrade Dr. Tarr probably has no compunction about sitting down at Marlowe’s and
ordering the special,” Antonio said, spitting out a stray piece of tobacco.

“That’s not entirely fair. Dr. Tarr has always maintained that animals, even those we eat, should be treated humanely…”

“What is humane Father? A cow living in the pastures of Illinois, beaten, forced on a train and then loaded into the bottom of a steamship to be run up a chute to have its throat cut? How is that humane?”

“It’s different, and you know it. That is why you came here as opposed to any of the other meat houses. It is why Halsworth wrote that article. It is unconscionable what they do to those piglets. But that is the perversity of the rich. I doubt any of the Society could even afford such a cruel indulgence. It would be foolish to … do something here. What kind of impact would that have? The rich are so decadent they will find some other perversity. I am no longer shocked by the callous cruelty of the patrons of this city.”

Martin watched as his words sank in. Antonio looked back at the meathouse and threw away his cigarette. Martin knew that Antonio had told him about the bomb because he wanted to be stopped. He wanted a reason why his destructive, suicidal act would have been simply folly. Martin settled himself in for a long night. He knew that at each Dante-esque stop he would need to find the words, the arguments to stop Antonio. He would get this friend of the animals through his dark night of the soul and perhaps even save it before it was too late.

Martin could tell Antonio was lost. The Five-Points was not an area that strangers could easily navigate, and that was the point.

“We need to ask someone,” Antonio said, checking the article.

“We should not be here. It is dangerous. Just last week two metro policeman were—” Martin began to say.

“There.” Antonio interrupted the priest’s tabloid tale, “I’ll ask those punks.”

Antonio handed the priest his wallet and timepiece and darted across the street to two punks playing Mumbley-pegs with a rusty fish knife. Martin noticed that Antonio kept a safe distance from the girls. The youngest, in a pair of oversized fireman’s boots, sloshed over to Antonio. He handed her an article and she gave him a few simple directions while her older sister kicked a rustling cloth sack.

“It’s just over there,” Antonio yelled back to Martin, handing the girl the rest of his pack of cigarettes.

O’Malley’s was the type of bar sailors went to for a fight, followed by regulars who cleaned up the unfortunate losers’ pockets. It didn’t have a sign, and even though Old Man O’Malley had been beaten to death by his wife years earlier, it was still named after him. Since O’Malley’s time little had changed except for the addition of a four-by-eight foot zinc-lined pit in the basement. Some rummies even joked the pub was so much the same, that the warped bar hadn’t seen a wash rag since the old man ran afoul of his wife.

The upstairs was filled with half-drunk men; it was too dangerous of a place to get completely sloshed. Martin had seen these men before—they came to his church looking for handouts. They were the type that had never known an honest day’s work, or any other honesty, in their lives. A gaggle of pierced adolescents pushed past him to the end of the bar where an ogre-like bartender was carefully counting out stacks of pennies. One of them, with a padlock and chain around his neck, began furiously arguing with the bartender, shaking a handful of filthy potato bags.

“According to Mathilda’s article the pit’s downstairs,” Antonio said, carefully folding the tattered piece of paper.

“This is a prime place to get pick-pocketed. Be careful, and don’t drink anything,” Martin whispered to Antonio.

Martin was a priest but he had also worked and lived on the Lower East Side his entire life. The Five Points was worse, but he was familiar with both the place and the people. He could see that Antonio was determined but a little afraid. Martin realized he knew little about his fellow Society member except that he worked on Long Acre, and that he was out of his depth. Martin was just about to drag him out of the bar, when he changed his mind. Let him see rat-baiting, let him revel in the cruelty of man towards the beasts. He needed to see it, and Martin would play the part of companion if only to keep him from becoming completely unraveled. He had seen others burn with righteous anger in the cause of animals and seen them consumed by the frightful indifference of their fellow man. He had seen the cold cynicism
in Mathilda’s eyes and he would not let that happen to Antonio if he could help it.

Antonio said something to Martin but his words were swallowed by the shouts of the bookies and the yelps of the dogs. Martin managed to finagle a spot for them near the edge of the reflecting zinc-lined pit. The regulars preferred the higher up benches to get a bird’s eye view and to be close to the beer kegs.

A pockmarked man jumped into the pit and lifted a tawny pit-bull up for the crowd to see. The betting frenzied into a crescendo as the bookies wormed their way through the sweaty throngs making coded marks on slates that hung around their necks. The handler set the dog into the pit and untied the kerchief that held the muscular dog’s jaws shut. The animal’s white teeth snapped viscously in the smoky air. The owner announced the dog was named Willy’s Trick and had previously dispatched 50 rats in 38 minutes.

A rugged man with a shaved head struggled with a squirming undertaker’s bag almost twice his size. He worked to untie the bag and brusquely pulled his hand out with a large rat latched onto his thumb. He shook the rat off to the ground and stomped it to the delight of the crowd. The bag exploded into the pit, with a swarm of ferocious river rats slipping on the metal. The owner could barely hold his dog back at the far end of the pit. Sensing the killer dog, the crazed rodents desperately scrambled to escape the pit and piled into the corner. An elaborate clock was lowered. A bell rang and the pocked face man released his pride, fleeing the pit.

The dog slipped once before careening into the frantic mound of terrified vermin. The pit bull’s mouth ran red with blood as it shook three kitten sized rats in its spine-pulverizing jaws. The rats regrouped, understanding that escape was impossible, and threw themselves on their attacker. For a moment only the back legs of the dog were visible under the gnawing blanket of rats. The pit bull’s yelps were muffled by the mounds of rodent flesh held in its vice-like jaws. The rats’ yellow teeth tore at the front paws and ears of the pain-frenzied animal as it tried to find more room to attack. Moments later the pit bull escaped the corner but the rats had already chewed off one ear and blood streamed down its front legs. The mob was on their feet, nearly crushing the shouting owner as he hung over the wood railing encouraging his Willy on.

A bell rang, and the judges in derbies moved into the pit. The men solemnly checked to determine that the rats were indeed dead, while the owner tried to revive poor Willy. Martin could see by the way the animal struggled for breath, its muscular frame shaking with each inhalation, that the dog would not live the night.

Martin led Antonio out of the basement as the slate-men shoved money into their pockets while winners and losers cued up for more warm beer and awaited the start of the next fight.

Martin watched the pit’s nightmare etched across Antonio’s face. He waited for a moment before speaking.

“Antonio, even Mathilda could not describe it accurately. As you can see, cruelty begets more cruelty. Perhaps it is a mistake to think that people, people like this, who experience cruelty and death every day in these alleys and streets could muster anything resembling compassion. They are ever as much victims as those animals in the pit. It is difficult to see, but it is true: Mathilda made a mistake in her article when she ignored that simple truth. What we saw is … the result of poverty, of dehumanization. Cruelty is learned and these streets are the universities of pain.”

“But the bastards enjoyed it. How could that owner let his dog…” Antonio tried to find the words for the sickness he felt.

“They’re not the problem. Cruelty is these men’s inheritance. Killing them, wiping out every pit, would accomplish nothing. Absolutely nothing, my friend. Some day when cruelty ends—the cruelty of man to man—the pits will be empty. That is the way. That is our hope,” Martin said, putting his arm around Antonio.

Martin felt relieved turning off Broadway onto Longacre Square. The theater-goers were exiting their hacks, rushing home after the shows. The square was filled with people from all over the city, from top-hats to scarf-wearing babushkas. The one unifying thread of the metropolis was the need for entertainment and Longacre Square was its home. Antonio had remained silent nearly the entire long walk north to the theater-lined square. Martin had allowed Antonio the silence, letting him ruminate on his words and what he had seen. Martin was tired from the walk but he still felt the subtle energy he always experienced when retrieving a lost soul.
“I really should get back. I have a sermon I must prepare,” Martin said, clasping Antonio’s shoulder in a fraternal way.

“I want to show you where I work, it won’t take long. Will you come?”

Martin nodded. The two men crossed the wide avenue towards a mountain of pseudo-Baroque architecture. A forest of plaster Greek statues and reliefs covered the nearly block-long edifice. Edison’s crackling electric lights still lit up the Hippodrome Theatre’s thirty-foot banner.

Martin felt small inside the empty auditorium, a feeling he had when he was a seminary student visiting the great cathedrals in Europe. The stage rose in the back, like a tall ship, full of glistening hardwood and innumerable coats of wax and oil that shone in the gloom.

“18 years I worked for the Sheinbergs here at the Hippodrome. I worked here before it was even called the Hippodrome. I’ve seen thousands of people pay their two bits and enter this hall,” Antonio said, mainly to himself as he walked like a somnambulist towards the stage steps.

“How many people does this place hold?” Martin asked, his voice hushed with appreciation.

“5,500 men, women, and children. 8 shows a week. Come up here,” Antonio said, his voice echoing from the stage.

The Italian pulled a Lucifer from his pocket and lit one of the gas footlights, casting a thin stream of illumination across the vast stage. The light ended on the side of a huge glass aquarium.

“That board is forty feet up, even though the posters say fifty,” he explained, pointing out the tall, extra-wide diving platform stretching high above the still water. “I know because I ran the cables, almost a hundred feet to the back. What you and the audience can’t see, is that the wood is connected to a steam generator in the basement. You may ask why but first, let’s go up. You can only understand from up there. Don’t worry, there’s an elevator.”

Antonio didn’t wait for a reply but disappeared into the darkness backstage. Martin had no choice but to follow.

Antonio called to Martin from the edge of the board. Martin grasped the iron of the catwalk until the coolness of the metal disappeared. The priest was not afraid of heights, but there was something disorienting about the long ramp leading up to the board. It was terrifying.

“Of course with the lights the Duke wouldn’t be able to see anything from where you’re standing. This is for obvious reasons. But come here,” Antonio said, beckoning him.

Martin screwed up his courage and made his way up the ramp, careful not to trip on the smooth wooden ribs.

“Are you sure it will hold both of us?” Martin questioned, trying to keep his voice steady.

“Dukes, all of them, weigh a lot more than the two of us. Trust me.” Antonio said, sitting down, letting his boots hang stories above the darkened stage.

Martin made it to the board and immediately stopped. His chest tightened like a screw and he fought back his vertigo.

“You said Dukes? There is more than one?” He asked, staring at his feet and not to the sides.

“Of course, dozens over the years. When a full grown horse hits the water from this height, many terrible things can go wrong. In fact we always had a spare Duke just in case the shock of a bad flop killed the horse right away. That’s why there’s the trap door you passed. Now look over the side from where I sit,” Antonio said.

Martin tried to will his legs forward but couldn’t. Something about being so far above the stage made the huge tank seem ridiculously small.

“I won’t, I can’t,” he said, with more anger than he felt.

“No, of course not. It takes a lot of getting used to. So you can imagine how hard it was to get a horse to the edge. You know this is safe, you see me on the edge and you know every day, and twice a day on Saturdays, a full-sized horse trotted off this platform but your body refuses. It’s normal. Look down at your feet.”

Martin hadn’t even noticed the bare copper wire grid on the platform until now. He could see the black outlines of the wire where it had singed the wood.

“They put copper-lined shoes on the horse and when they came up the ramp it was my job to throw the switch. You see, a horse won’t run to the side or backward when in pain, but will always go forward. That is how we make stars here at the Hippodrome.”

“You should write an article. If people knew…” Martin started, taking a step back from the edge.

“An article to teach the people. Do you really think even the children believe a horse would
jump into a tank of water, on its own, from here?"

“You have to believe that if people...”

Antonio jumped up and moved towards Martin.

“Belief is your occupation; I already told you what I did. I know the audiences. I have seen—” Antonio’s violent coughs cut off his sentence. He hacked so terribly that Martin believed he could feel the board shake.

“Let’s get down,” Martin said, retreating back to the catwalk.

ANTONIO DIRECTED the priest with hand gestures, his powers of speech stolen from him by his coughing, to the other ladder leading to the backstage. Martin was so relieved to be down from the diving platform he hadn’t even noticed Antonio fiddling with a lock by a trunk marked “Fireworks! No Smoking!” Antonio removed a large leather bag from the trunk and set it down carefully by his feet.

“That’s it?” Martin whispered.

Antonio nodded and said, “It took me six months to make it. It’s delicate, but will do the job. I got the recipe from an anarchist pamphlet last May Day.”

“Antonio, I see what this is all about. Just because of what you saw—I don’t mean tonight, I mean the past 18 years. You feel guilty and now at the end of your life you want to do something to make up for it somehow.”

“Maybe I do. Shouldn’t we take responsibility? Doesn’t someone have to take responsibility?”

“No. That is, yes, but not this way. Who is responsible? You? You were doing a job. It was a job and maybe jobs like that you had should not exist ... but they do. If you didn’t do it someone else would.”

“But that can’t be an excuse.”

“No, of course not. You want to find someone to blame. Maybe you even blame yourself but everyone is to blame. Look at my shoes. I have dedicated myself to helping animals, like St. Francis, and yet my shoes are no better than the pit we saw or the board we were on. The leather, the glue made from horses and even the laces ... do you know where they come from? I’ll tell you: cats ... kittens actually. Their stomach linings are used to make these laces. Tonight I’ll take a cab home because I need to work on a sermon on how we all must respect God’s creation, animals included. Yet I know just as you do, how hack horses are treated in this city. I have wept to see old, wise horses, whipped bloody when they no longer can see which way to turn. I have even been to the so-called stables on 17th Street. These prisons are enough to make you sick. Yet tonight I’ll ride back to the rectory. You want to blame the five thousand average people who come to this theater and hundreds other places like it to escape their lives. How dare you judge them! How dare you judge yourself? That is for God only. So who is to blame?”

Martin stared at Antonio, who looked down at his bomb. Martin waited for his answer but there was none. Sure he had made his point, and now having a theme for his sermon, he was eager to return to the rectory. He was convinced he had saved Antonio from seeking his a misguided and sinister vengeance.

MARTIN DID NOT feel the fatigue of having missed an evening's rest. He had worked through the night on his sermon, convinced it was the best he had ever written. He would open with Revelations 5:13.

Martin was pleased that the church pews were filled elbow-to-elbow. He began the benediction and looked out over his kneeling flock. In the back row, Antonio remained standing. Martin locked eyes with the Italian as he lifted the leather case above his head...

NEAL WAS SLURPING noodles from a paper box on the corner of Mulberry as Mathilda in her mourning dress glided between the screaming fire-wagons across the street.

“The good doc didn’t make it to the pet store,” Neal said between mouthfuls of Cho Pai.

“Most of us never do, and that’s probably for the best.”

“Do you want me to go fish him out?”

“I’ll do it,” Mathilda said, heading for the opium den.

Neal threw the empty box in the gutter and followed the fire-wagons rushing towards St. Francis.
Dear reader, after the shocking events of my previous narration, I fear you may have developed an intense aversion to the rigors of travel. This is only to be expected, owing to the assault upon my person in a French railway carriage by a ruffian of Frankish extraction and mysterious intent. Yet let me assure you that the terrible events of my journey had only just begun. You will recall that I had left England for Paris in the summer of 19— in pursuit of a particular Monsieur D—, a clockmaker responsible for the construction of a gear-driven time bomb the like of which had been used to destroy an innocent countryside barn. Accompanying me were my dear friend Francis Edgar B—, a scientific genius whose family had shown me so much kindness throughout my early life, and Bruno von H—, a charming gentleman-scientist from the Rhineland. Bruno’s almost fanatical suspicion of the Bavarians had developed a somewhat prophetic quality during the journey when a beautiful Bavarian assassin called Angelika had very nearly taken my life. As we approached Paris, my head swam with grave imaginings of what might lay before us, but, as I shall relate to you, the reality of what was to come proved far more terrible than anything my mind had predicted.

W e arrived in Paris without further incident but I must confess that I was extraordinarily relieved when we arrived at our hotel. I cannot speak for my companions, but I found my personal accommodations to be particularly satisfactory and took the opportunity to freshen up after the journey. I suspect that Francis was of a similar mind, but Bruno was impatient to be off and I could not stand the thought of letting him run about among the French unattended, certainly after the events on the train. Francis protested to such a hasty departure, as was his just prerogative, but he refused to let me accompany Bruno on my own.

Nevertheless, we were treated to a pleasant stroll through the Paris streets while we attempted to locate the clockmaker’s shop. On several occasions, we sought to assistance of local Parisians in our search, and while it soon became apparent that Monsieur D— was a craftsman of some certain prestige, time and again we were met with a peculiar blend of helpfulness and disrespect. I hope that I do not overstep my bounds when I tell you, dear reader, that of all the places I have traveled to—including select portions of America!—I to this day regard Paris as the most disagreeable by far. It is not so much the city which troubles me as the curious attitude of the natives, who regard themselves as inherently superior to any others they might encounter—an attitude which, one must remember, remains entirely the prerogative of the free-born Englishman. Let us not forget that it took the French until 1789 to throw of the chains of absolutism, and in doing so they proceeded to make an absolute mess of their much-lauded Revolution.

It came as a consequential shock to me when Bruno, without any semblance of warning, stated quite boldly, “You know, Alex, I do so love France.”
I stared at him dumbfounded for a few moments before gathering my voice sufficiently to question his odd comment. "Bruno... I thought you hated France...."

“Oh, don't be ridiculous,” he answered with a hearty laugh. "I love France! I hate the French," he clarified, a smirk dancing about upon his lips, "but I love France." He turned toward a particular iron monument of incredible height and folded his arms in distain. “That monstrosity, on the other hand, I find to be extravagantly distasteful.”

I peered past him at the great pile of metal. “Oh, I say!” I said. “Yes, that is rather....” I searched for a polite word. “Pointed.”

“Hmph,” Francis snorted, no doubt affected by some contaminate in the wind. “I rather like it.”

“Yes, you would,” Bruno agreed.

Francis seemed somewhat confused at Bruno's statement and studied the German as if suspicious of his motives. “Yes, wouldn't I?” he finally concluded after a certain hesitation. “What is it?”

“La Tour Eiffel,” Bruno answered. “An inverted pockmark upon the landscape of Europe.” He threw an arm about my shoulders and swept his hand across the sky to encompass the spire's peak. “An unsightly advertisement of what every Frenchman will promise his lover, and none will ever find the capacity to deliver.” He stepped back with the look of a refined aesthetic regarding a profoundly unpleasant bit of gutter. “I shall be glad when they tear the damnable thing down.” With a flourish, he turned his back on the tower as if to blot it out of mind as well as sight. “Come along, let's find that clockmaker.”

For being a craftsman of a certain fame and quality, Monsieur D— proved to be surprisingly anonymous in his profession. His shop, while spacious and well-appointed, had been hidden away along a largely disused boulevard in one of the less fashionable portions of the city. I would hesitate to say that the area was poor, but certainly the clockmaker's shop seemed to be the economic cornerstone of the entire neighborhood. Its face on ground level was a great wall of windows displaying clocks of all manners, forms, and purposes ticking away at the direction of some deep universal timetable. This was the place where our much-awaited answers were to be had, and it would not do to be found dawdling.

I interrupted Francis, who had begun to chastise Bruno for distributing alms to the poor, and pushed the two gentlemen into the shop ahead of me with great politeness and equally great force. Beyond the display of intricate clockworks, we found ourselves in a wide but uncomfortably shallow chamber cut across by a counter of significant size and standing. Behind this sat a pale-faced youth with dark hair, a well-managed suit and an expression that does not bear transcription. Peering over his nose at us, the young man gave a polite smile and waited patiently.

I paused, leaving my companions the option of taking charge, but found to my dismay that Francis had been waylaid by a particularly clever mechanical bird which dutifully chirped to hour, half-hour, minute and a random assortment of associated seconds without any sense of pattern or reason. Bruno, by contrast, had lifted one of the clocks on display from the countertop and seemed about to give his most frank and unwanted appraisal to the clerk.

“Bonjour, monsieur,” I greeted the young man, interceding before Bruno could transform a simple timepiece into an international dispute.

“Yes?” the clerk replied, something unpleasant in his voice leaking through the polite smile he offered. “You are here about a clock?” He stressed this word in particular as he snatched away the piece that Bruno had been examining.

“In a manner of speaking. May we have a word with Monsieur D—?”

The clerk waited for a calculated moment before responding. “No, I am afraid not. You may ‘have a word’ with me. Monsieur D— is very busy and cannot be expected to wait upon every tourist who wanders by.”

My face fell somewhat distinctly. “Are you absolutely certain? It is a matter of some urgency.” I lifted the clockwork bomb, which I had carried with us since the hotel, and placed it gently upon the counter. “It’s about this, which I believe was his creation.”

The clerk peered at the object as if its very presence offended him. “Are you absolutely certain? It is a matter of some urgency.” I lifted the clockwork bomb, which I had carried with us since the hotel, and placed it gently upon the counter. “It's about this, which I believe was his creation.”

The clerk peered at the object as if its very presence offended him. “I cannot say that I recognize it. I doubt very much that Monsieur D— will wish to see it either. Now, if there is nothing else I can do for you—”

At this moment, Bruno took charge. Reaching out with the speed of a striking viper, he took the
clerk by the collar and pulled the surprised young man halfway across the countertop. Leaning in to speak, my dear friend could be heard to growl, “Now listen here you unpleasant little frog... I’m an unusually impatient and ill-tempered German, and I want to speak to Monsieur D— immediately, so I suggest you get to it before I incorporate this shop and everyone in it into Alsace-Lorraine.” With that, he thrust the young Frenchman away from him as if relieving himself of a soiled handkerchief.

While I expect the clerk was more affected by the proximity of Bruno’s snarling face than by the threat itself, the result was instantaneous. As soon he had been released, the clerk scurried backward, humble and apologetic as if in fear for his life. “Uh... yes, sir!” The young man stumbled into the doorway leading to the back room. “Um... ja, mein herr—”

The clerk’s use of German did nothing to placate the raging Bruno. “Unless I say otherwise, you will politely and humbly speak French to me, boy, and you will like it!”

“Oui, monsieur!” the hapless clerk all but squeaked before he fell backward into the workshop room behind him, shouting for Monsieur D—’s assistance.

I stared at Bruno, speechless at his unruly behavior, and he smiled in return. “Well, I think that went rather well, don’t you?” he asked.

At this, the man seemed to catch himself, and he quickly offered an embarrassed laugh by way of apology, gingerly sliding his pistol beneath his frock coat. “Ehem... yes... Sorry about that, Frenchy.” He set about straightening the old man’s tie and collar as if an approving parent. “See, there, no harm done.”

“Yes, thank you, Bruno,” I interjected, noting Monsieur D—’s continued bewilderment. Sensing that the entire situation demanded a significant reorganization, I directed the clockmaker’s attention to the box. “You are Monsieur D—, is that correct?”

Monsieur D— laughed pleasantly. “Of course I do... I made most of it, you know.” He ran his fingers lovingly along the sides of the box before removing the faceplate and gazing with admiration at the intricate gears. Before our departure, we had removed the flint wheels and explosives to circumvent the risk of detonation, and the old man did not seem in the least bit surprised that they were missing. “Absolutely beautiful. My finest work, if I may be afforded the liberty of saying so.”

“What is it?” I asked, eager to exhaust the man’s understanding of the dreadful situation.

“Why, a music box,” the little man replied. He motioned to the empty spaces in the box’s corners. “Of course, it will do you no good until the chimes are put in place here.”

“Who commissioned it?” It was Bruno who asked this, determined to overcome his earlier bout of impropriety by sheer force of personality.

From Monsieur D—’s reaction, he seemed to have succeeded. Smilingpleasantly, the old man confided, “A very pleasant German lady put in an order for five of them.” He hesitated. “Well, surely you must know her. How did you come by it?”
I was quite at a loss for words, and stumbled over my reply. Doubtless, I would have incriminated all of us had Bruno not diverted the clockmaker’s attention. “Oh, yes, it must have been dear Angelika,” he said. “She gave it to us, you know, but getting anything useful out of that woman is rather like...” He abruptly changed topics with such casual precision that even I very nearly missed the transition. “It’s a truly magnificent device, of course. Did you design it yourself?”

Monseur D— was immediately distracted from his moment of suspicion. Puffing up with a sort of limited pride, he adjusted his tie nervously. “Well, no,” he confessed, “although I consider it a great honor to have been given the opportunity. And I do feel I did the plans justice...”

At my side, Francis began to shake the clockwork bird which had fascinated him. “I say! I say, is this thing broken or something?”

“Who drafted them?” I asked hurriedly, grabbing the toy away from Francis.

“You will not believe me,” the clockmaker insisted, “but if I recognized the signature, it was none other than Max U—.”

“Max U—?” I repeated, shamefully ignorant of the name. “Who is Max U—?”

The Frenchman was stunned by my stupidity. “You have never heard of him?” We shook our heads in unison. “Herr U— is perhaps the greatest clockmaker in the world. His designs are very complicated, yet there is a certain sublime efficiency to his work. Here, here, let me show you.” The old man scurried into the back room from whence he returned bearing a great portfolio bursting with intricate diagrams. These he proceeded to explain to us, joyfully comparing his handiwork with the original prints in a particularly significant manner.

While I found the display both charming and informative, time was running short, and I was relieved when Monseur D— promptly concluded his display with a simple, “Well, and so forth, as you can see.” Perhaps embarrassed at having discussed such a tangential topic so fervently, he quickly set about returning the clock prints to their folder.

I was even given the eloquence of the Bard himself, describe with any justice the bounds to which dear Francis’ temper leapt upon hearing that Bruno and I meant to depart for Germany on the morning train. I must confess that this was more Bruno’s plan than mine, but I could well understand his impatience given recent events, and I was not about to abandon him simply for the sake of convenience. Francis, however, wasted no time in professing just how strongly he objected to the idea of traveling yet again after so short a space of time. He particularly could not see the reason in visiting a secluded country village in the Schwarzwald, which must certainly lack any of the amenities found in our Paris hotel. While I insisted that I would find no offense if Francis chose to remain behind with the majority of our baggage, the dear fellow would not hear of such things. Now, as before, that noble paragon of the English gentleman insisted that he accompany us, if only to shelter me from some of the more eccentric concepts Bruno was known to expound at odd moments.

We traveled much of the way by train, this time without incident, but were finally obliged to transfer to a carriage for the remaining leg of what we had intended to be a very brief excursion. We traveled lightly, leaving the majority of our things behind to wait for our return to Paris. Bruno had taken this a step further, changing from his suit into the charming field garments and riding duster he preferred when testing his latest experiments. The country air was warm and vibrant, and I found myself strangely revitalized by the rustic,
sun-lit surroundings. The looming trees were more beautiful than the most elegant cathedrals of civilized Europe, and I was delighted to catch sight of all manner of beasts and birds going about their daily business. I must confess that until our visit I had always taken the name of the "Black Forest" quite literally, and was pleasantly surprised to find none of the shadowed lairs, lurking goblins, or black-armored knights that I had fantasized.

The sun was already descending as we arrived at our destination, and the colors that were painted across the landscape still defy my most fervent attempts at conveyance. The town in which Herr U— made his home was small and peaceful, nestled in a dip between a pair of rolling hills within the forest. The buildings were all charmingly archaic affairs of weathered stone and wood, and we received more than our fair share of suspicious looks from the locals as we stepped down out of the carriage. A few somewhat strained inquiries directed us to the house of Herr U—, where we found a small boy of perhaps ten drawing a series of interlocking spirals in the dirt with the end of a stick. Seeing us, he stood up quickly and dusted himself off as if coming under inspection by a disapproving mother. He displayed no fear at our approach, and his face was filled more with fascination than with any other emotion.

Reaching the lad, I bent down to come closer to eye level and offered him a warm smile. "Excuse me, young man," I said in German. The boy, for all his boldness, still watched me cautiously. I thought it best to make introductions as a way of gaining his trust and goodwill. "My name is Westminster," I said, still smiling, "but you can call me Alex, if you like."

The boy became somewhat more cheerful at this. "Hello, Alex. I'm Otto," he said. I offered a bow like a perfect little gentleman, and I replied in kind.

"Tell me, Otto, is this the house of the great and famous uhrrmacher, Herr U—?"

Otto nodded firmly. "Yes. He's my father," he added proudly, standing taller as if to reach his father's no-doubt mythic height.

"Well, I'm certain he is," I agreed. "Otto, it's very important that I speak to your father. Can you fetch him for me?"

Without a word, Otto nodded in that charming manner children so often do, and rushed into the house, calling for "Papa." Almost instantly, the door opened and the boy returned, dragging after him a tall, bearded man with a healthy, slender stature and the delicate hands of a hereditary craftsman. The poor fellow had obviously been interrupted in the midst of his work, for he wore a crude smock dotted with all manner of fine tools and instruments over his clothing. Tucked under one arm I noticed the boxy shape of a wooden clock, which seemed literally stuffed with all manner of gears and springs. The man, no doubt Herr U—, had joined us with a look of grave concern upon his face and a heavy length of polished wood in his empty hand. No doubt there had been some misunderstanding, for he breathed a deep sigh as if relieved to be meeting strangers.

"Herr U—?" I asked, taking a tentative step forward. The man nodded in confirmation. "Sir, it is very important that we speak to you about a very complicated music box that I believe you designed for a Bavarian woman by the name of Angelika."

All three of the men around me showed visible surprise at my forward divulgement of the facts, but I was in no mood for skirting around the issue. At length, Herr U— indicated Bruno with his club and asked, "You're Herr von H—, aren't you?"

Bruno smiled. "Naturally. Always nice to meet an admirer." He waved toward the house. "May we come in and sit down? That box my dear friend is carrying there is quite heavy with clockwork, and you may wish to have a look at it."

Herr U— nodded slowly. "If you would like, you are welcome to come in and sit down," for some reason, which was not then apparent, he felt the desire to enunciate his next words with extreme clarity, "but I will understand if you would prefer to turn around, get back in your carriage and leave this place, because there is nothing that I can do to stop you."

"What a curious thing to say!" Bruno laughed, patting the man on the shoulder. "Of course we'll come in, don't be silly!"

Sighing deeply, Herr U— bent down and pressed his unfinished clock into little Otto's hands. "Otto," he said, "I want you to bring this to the Schuster's house and then stay there until I come to get you. Do you understand?"

Otto nodded dutifully. "Yes, Papa." Turning his bright eyes toward me he smiled, bowed politely again, and then dashed off down the street just as a child ought to do.
Herr U— stood and led us into his house. The interior proved to be a sight in and of itself. While unusually spacious, the building was filled to bursting point with endless piles upon piles of clocks and gears. Timepieces of all sizes, many lacking all but the most rudimentary of housing, were placed in some mockery of good English order alongside heaps of gears, springs, tools, and mysterious accouterments. A great chorus of ticking filled the air like a swarm of buzzing insects, and I feel no shame in admitting that I suddenly found myself shockingly light-headed. With loose springs, clock hands and God knows what else snatching at my garments, I was very much relieved when we were finally seated in what appeared to be a quaint kitchen at the back of the house.

Breathing deeply to regain my breath, I placed the clockwork bomb onto the table and pushed it across for Herr U—'s inspection. The man was curious for a few moments, before he pried the top open and caught sight of the clockworks within. At that moment, there was an instant recognition. Nodding gravely, he fixed me with a firm look.

"To answer your first question: yes, this was my design."

"Then do you know my second?" I asked with a wry sort of interest.

The man pondered this for a moment. "Why did I built it? Because I was paid. Who commissioned it? Representatives of the Bavarian Crown. Do I realize what it is? Yes... it is an overly complicated clockwork bomb designed to be passed off as a music box to the unsuspecting clockmaker who constructs it. " He tapped the clockworks approvingly. "Forgive me, " he said abruptly, standing in a sudden burst, "where are my manners? Let me fetch you something to drink. Beer?" There was a strange hopefulness in his voice. When our expressions conveyed our disinterest in the substance, his expression fell slightly. "Wine?"

"Oh, yes, please!" Francis cried, speaking for the first time since our arrival. The demands of genius were doubtless occupying his attentions prior to that point.

"Of course," Herr U— answered, his tone almost mournful. "I have just the thing set aside for you." He rummaged about the room very purposefully for some time, until it almost seemed as if he were waiting for us to recant our interest in the drink. Finally, shoulders drooping somewhat curiously, the man produced a bottle and some glasses from inside a nearby cupboard and rejoined us at the table. As he poured the wine, he returned to the subject at hand. "The workmanship of that device is very impressive. Who actually built it?"

"Monsieur D— of Paris—" I began.

"And Sons," Bruno reminded.

Yes, and Sons." I took a drink of the wine and found it to be delightfully sweet with an exotic hint of something tantalizing and elusive. Strangely, a few sips proved more than sufficient to loosen my tongue considerably. "You should have heard the man speak of you, sir. It was like hearing an artist speak of the great Masters!"

For all his pride of authorship, there was a perpetual discomfort in the lines of Herr U—’s face. "Well, the Frenchman has done an impressive job here. I only hope he never learns what it is he played an unwitting part in."

There was a growing discomfort in my abdomen, and I leaned forward to catch our host’s gaze. "Tell me, sir, just what has he played an unwitting part in?"

Herr U— paused and leaned back in his chair, obviously ready to speak but hesitant to undertake such so significant a discourse. "Some I know, some I can only presume. I know Herr von H— by reputation," he said, taking a moment to look with great emphasis at Bruno, "and his fearless enthusiasm is a veritable trademark. I was hired to design an unnecessarily complex bomb, presumably so that if you survived the explosion your curiosity could be counted on to drive you to the clockmaker in Paris, whose enthusiasm for my work would drive him to offer up my name... then direct you to me... and then finally to the Bavarians."

I felt my head began to spin, and a curious sensation filled the space behind my eyes as the world around shifted in peculiar angles. At my side, Francis began to look this way and that as if enthralled by a darting horde of invisible flies.

"Bruno!" I exclaimed, quite in spite of myself. "Bruno, the Bavarians are drawing you into a trap!"

Bruno snorted, somewhat perturbed at the accurate analysis of his mind’s inner workings. "Well, I suppose we did follow the bread crumbs here, but I have no intention of setting foot in Bavaria, certainly not now after learning all this."
I suddenly felt a presence step into the space between myself and Bruno, and woman’s voice spoke softly into our ears. “Of course not, Bruno darling.... That is why we met you here.” It was Angelika.

At that moment there can a tremendous racket, as if dozens of large men in steel-shod boots were stomping up and down upon the ceiling. I struggled to rise, but my feet had become like air and my head something akin to a lead weight. In the next instant, the already cramped room had become crowded by a group of men of impressive stature, all shouting in German for us to keep our hands on the table. The noise and movement threw my vision into a great riot of stimuli, and it was all I could do to make our Herr U—’s solemn and anguished face.

“The wine!” I exclaimed. “The wine was drugged!”

Angelika’s triumphant face drifted into view. “Well deduced, dearie.... A fine Bavarian vintage I blended myself. Enjoy the aftertaste... it has a hint of citrus.” She turned toward our host and tossed a small purse, doubtless filled with Marks, onto the table. “You’ve played your role perfectly, Herr U—. As agreed, you and your family will never be troubled by us again.” As Herr U—’s jaw tightened somewhat dramatically, Angelika added, “Little Otto is safe... so long as you follow our agreement.”

At my side, Bruno folded his arms in what appeared to be great indignation. “Oh, Angelika.... It seems you never could get enough of me. But... if it’s me you’re after, let the Engländers go. They’ll run back home like frightened puppies and never bother you again. I can’t have you dividing your attention between me and the likes of old Francis there, now can I?”

Angelika’s resulting laughter was unpleasantly clear and beautiful. It would have been ideal if uttered by a young debutante upon a pleasant spring afternoon; in this time and place, it was horrific in both sound and conception. “Bruno, Bruno, Bruno.... Your honor is surpassed only by your arrogance. I rather suspect that having these two ready at hand will make you more... pliable.”

This last word was murmured in Bruno’s ear in a dreadful display of social impertinence. The sheer proximity of Angelika’s lips to said ear is a subject which I shall not comment upon, but which I trust you, dear reader, can clearly—and chastely!—envision. Bruno smiled grimly, and with the speed of a jaguar, drew a slender dagger from the sleeve of his coat and thrust it upward at Angelika’s exposed throat. The woman let out a gasp of surprise and struggled to jerk away, but Bruno was the faster and his aim was true.

Nevertheless, one of the Bavarians was quicker still. With reflexes that made my head spin all the more, a particularly lupine fellow with a sharp chin and pronounced spike of beard snatched Bruno’s hand at the wrist and gave it a bone-crushing squeeze. Bruno resisted valiantly, inducing the dagger upward to press into the fleeing Angelika’s flesh, but in the end his strength gave out and his hand opened limply. I struggled to rise, seeking naively to come to Bruno’s aid, but it was a wasted effort. A rough sack was thrust over my head, blotting out all but a feeble dotting of light, and in the darkness the border between wakefulness and unconsciousness faded away into a dizzy spiral.

Dear reader, I feel ashamed to end my narrative upon this frightful note, but I am left with very little choice in the matter. I shall not elaborate at the moment, but dreadful circumstances have demanded that I depart from my typewriter until the danger has passed. Who could have imagined the terrible purpose to which dear Bruno’s peaceful air ships might be set? For now, let me assure you that my companions and I were very much alive, but that our situation had abruptly become quite dire. Trapped in the hands of treacherous Bavarians, our fate, indeed the fate of glorious Britannia itself, now hung by a single thread. As we would soon learn, the Bavarians were but one small portion of an even greater threat that now prepared to crush Europe between its mighty jaws. Steel your nerves, dear reader, and prepare for a tale of treachery and deceit as terrible as the betrayal of Judas himself, when next my narrative resumes.

Sincerely yours,
A. Westminster, London 19__
Libby Bulloff: (author & illustrator: Paint It Brass, page 46; editor) You may have seen Libby’s wearable art and photo projects on various blogs such as Boing Boing, WarrenEllis.com, Diesel Sweeties, Craftzine, Makezine, the Webomator Blog, Street Tech, and Etsy’s The Storqce. She tends to post recent work at http://www.exoskeletoncabaret.etsy.com.

Professor Calamity: (author, Green Fairies, Witch-crades, and Angel Tongues, page 36) Professor Calamity is an ex-alienist and current inventor. He is a dabbler in metaphorical substances and has published a number of monographs on subjects of consciousness. He currently volunteers at an anarchist free-clinic in New York City where he works as a paramedic when not plotting the overthrow of the State.

The Catastraphone Orchestra: (author, Antonio’s Answer, page 58) The Catastrophe Orchestra is a politically artistic collaboration between musical operators and mechanics who make and serve fantastic machines in the hope to overthrow this rotten system. We are anarchists by profession and musicians who are influenced by punk and H.G. Wells. We can be reached by carrier pigeon or if you must by e-mail: greenapplecollective@yahoo.com

Nicholas Cowley: (author, The Duel, page 48) Nicholas studies literature, he thinks this is what you call a “good time”. Sometimes he writes words in the shape of the many hued birds and beetles that lie languid in the heat of his tropical home, Queensland, Australia. You can find him at nucowley@gmail.com


Esther: (author, For Freedom, page 6) Esther is the co-founder and editor at Eberhardt Press of Portland, Oregon. With Isabelle Eberhardt being the inspirational namesake for the press project, Esther was happy write about the life of that unyieldingly free and peculiar human. Esther has spent many of her days working as a carpenter and more than a few nights running old printing presses. [Editor’s Note: Eberhardt Press printed the beautiful covers for The SteamPunk’s Guide to the Apocalypse]

G.D. Falksen: (author, An Unfortunate Engagement, page 68) G. D. Falksen is an author and professional history student. He is currently pursuing two Masters degrees. His work can also be found in The Willows magazine, and he can be located online at www.myspace.
Fabiola Garza: (illustrator, page 14) Fabiola Garza is an illustration student at Rhode Island School of Design. If you are interested in looking at, buying, or commissioning artwork visit her gallery at http://crownjewel.deviantart.com or email at fgarza@risd.edu

Dr. Geof: (comic, page 4) Contrary to popular opinion, Dr. Geof is both an illustrator and perpetrator of the fetishman comic series (www.fetishman.co.uk), as well as an astronaut, a scientist, a lion-tamer, a spy, emperor of Mars, a dinosaur, and an accomplished, if unconvincing, liar. He is collating his humourous physics etchings, with the occasional steampunk doodle, at a secret underground webspace that is secret: (www.islandofdoctorgeof.co.uk) And yes, he has finally finished his website.

Claire Hummel: (illustrator, cover) Claire Hummel is a senior in Illustration at the Rhode Island School of Design and likes to pretend that she has a plan for her life post-graduation. She prides herself on being one of the founding members of the League Veritas—as well as the fact that it’s such a secret society that no one seems to know about it yet—and enjoys spending her free time constructing corsets and handling rather large pythons. She’s always willing to discuss commissions, so feel free to send her an email at shoomlah@gmail.com or vist her gallery at http://shoomlah.deviantart.com.

Ika: (illustrator, page 37) Ika is a musician, digital artist, and designer from Montreal Canada. A man who’s artistic versatility has helped to create unique personal and professional projects.

Kate Khatib (editor) Kate teaches classes on film and literature at Johns Hopkins, helps edit the Comparative Literature issue of Modern Language Notes, writes surrealist rants, and collages obsessively when she’s not busy with her book-selling responsibilities as a member of the Red Emma’s Collective in Baltimore. Someday soon she might even finish her dissertation on American Surrealism and start her own publishing house.

Margaret P. Killjoy: (editor) Margaret writes fantasy stories, plays music, and generally hates the government. Margaret also is a major contributor to Strangers In A Tangled Wilderness, www.tangledwilderness.org

Evelyn Kriete: (illustrator, page 68) Has run Jaborwhalky Productions (www.jaborwhalky.com) since 1997, and has been a promoter, freelance graphic artist, and advertising ninja since dinosaurs ruled the earth. In addition to doing illustrations, she has used her ninja powers to get a SteamPunk Magazine release party in New York City and has gotten it mentioned on G4TV. She also works for other magazines such as “The Willows” and “Weird Tales.” There is a theory that one day she will actually slow down her projects enough to eat and sleep, but this is only a theory.

Juan Navarro: (illustrator, page 30) Juan Navarro is an artist living in Miami, FL. He handles various art styles and has recently begun various projects for the video game industry. You can see his work and get hiring info off his site at ThisIsJuan.com

Prof. Offlogic: (author, Build Yourself A Jacob’s Ladder, page 10; Brass Monkeying, page 54) A native of Indian Territory who missed out on a career as an evangelist due to the curse of inappropriate giggling, Offlogic earns a living designing electronics for ‘intelligent pipeline inspection pigs.’ A former toy department/amusement park/funeral home worker, in his off-hours he devises infernal devices, foments violent revolution (using household chemicals) and closely guards his secret identity.

Rachel Olson: (editor) Rachel designs steampunk jewelry—available at ratchet.etsy.com—and teaches ceramics to kids.

John Reppion: (author, Doppler and the Madness Engine, page 30) John Reppion’s day job is writing comic books with his wife Leah Moore. In his spare time he writes articles for the likes of The Anomalist, Fortean Times, Strange Attractor Journal, and others. John is currently working on a book about Liverpool’s ghosts and hauntings for Tempus Publishing which will be published in mid 2008.

Fabio Romeo: (illustrator, page 41) Fabio Romeo is an art student from Brazil. He likes to draw on paper, scan it, and then do weird things in Photoshop. His work and contact e-mail are available at his website: http://www.fabioromeo.com.

Emily Trow: (illustrator, page 48) Emily Trow is an English girl that has been living in Australia for almost 3 years now. She is currently a visual art student in Brisbane and creates work in the hope of provoking thought, inspiration, and a smile within the viewer. She uses a range of medium not only to tranform the stories, poems, songs, and spoken word of others, but to create using the inspiration surrounding her. To get a small flavour of her work go to http://www.flickr.com/photos/emilytrow/

David X. Wiggins: (author, A Fabulous Junkyard, page 14) David X. Wiggins grew up in Tokyo, Singapore, Arlington, Moscow, and Narnia. He currently occupies a location somewhere between Brooklyn and Interzone, but you can reach him at wiggindavid@gmail.com.
**Production Schedule**

SteamPunk Magazine is, as of now, changing schedules. There will be two issues released each year. During the summer, a slimmer volume will be released, containing our serialized fiction, reviews, and other pieces that simply cannot wait until winter. Each winter we will release a full-length issue, packed to the brim with how-to's, fiction, theory, and the year's best of everything you've come to expect from us.

This change was not made lightly, but it was considered to be the only way that the magazine could live on. In the meantime, continue to expect Strangers In A Tangled Wilderness to publish material that is not afraid to keep the Punk in SteamPunk.

**About Strangers In A Tangled Wilderness**

(and why the magazine is so cheap)

Strangers In A Tangled Wilderness has been publishing zines since 2004 or something. We are an anarchist collective, meaning all power is distributed horizontally (although our group is so small this is essentially a non-issue). We are proponents of the gift economy: this is to say, we believe that society would be better run in a decentralized fashion, with the economy reduced to one of freely giving and receiving, thus undermining the false concept of economic scarcity.

Charging money for SteamPunk Magazine at all is considered a compromise, and this is part of why we embrace Creative Commons and allow people to reproduce our magazine freely.

However, it is important to disclaim herein that not every—not even the majority—of our contributors or readers ascribe to the political beliefs that we, the publishers, do. And this is fine with us. While we consider our ways of organizing to be important, we have no intention of preaching.

For more information about anarchism and the gift economy, we highly recommend the writings of another anarchist publishing collective, CrimethInc.: www.crimethinc.com

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Submit to no Master!
but submit to us!

Our content comes mainly from submissions. Two points to keep in mind before submitting: we publish under Creative Commons licensing (see below), and we pay only in contributor copies. For the next issue, issue #5, we do not need additional submissions—except material to review. Next winter, however, we hope you will send in your year’s finest work!

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 under-classes, 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 are less likely to be run and 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 maintain a list of illustrators who are interested in helping us. If you are interested, please email us and let us know, either sending a sample of your work or, preferably, providing a link to a portfolio website. If your work is to our liking, we will add you to our list of interested illustrators.

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.

Comics: We would love to run more. Contact us!

Reviews: We accept books, movies, comics, RPGs, music, etc. for review (as well as free tickets to shows!). However, we do not review everything we receive: we will only review material we consider to be exceptional and of note to steampunks.

Fashion: We are more interested in DIY skill-sharing than the exhibition of existing work. If you want to share patterns or tips for clothing, hair, or accessories, then please let us know!

Ads: We are not interested in running advertisements at this time.

Other: Surprise us! We’re nicer people than we sound like.

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The world is coming to an end. Make no mistake about it, the days are numbered. Where you are, you can’t even imagine what it will be like when the bottom hits. Or, to put it differently, the world is always ending. What comes next is up to us. Every morning we wake up and sweat and bleed to put an exact duplicate of the previous day’s world in its place. We need not do this, but we do, out of fear, or despair, or psychotically deluded petty ambition, or sheer stubborn lack of imagination. At any moment we could all stop paying rent and going to work—nothing could stop us if we all deserted together—and rebuild society from scratch without landlords or loan payments. Heaven knows we’ve all had that daydream at least once. It’s not police or politicians that keep the wheels turning and the bodies burning, it’s our own compliance and complacency, not to mention lack of faith in each other.

Yet even if we insist on keeping at it, the Disaster is not sustainable. Capitalism as we know it is not going to be here in five generations—any environmental scientist can tell you that. Likewise no one has to argue for the destruction of the middle class—it’s already destroyed: it is the class of people laid waste by their own materialism and duplicity, suffering emotional and psychological consequences to which any psychiatrist can attest. It’s no longer a question of whether the system we grew up in has created the best of all possible worlds—everybody knows the answer to that question by now—but of how we’re going to handle the mess next time the terrorists get through the checkpoints, the fuel supply runs out, the computers and power plants break down. Considering other options, trying them out, that’s not radical—it’s just common sense when the writing is on the wall.

But are we really going to live to see anything else? Do we dare hold our breath for another world?

Despite the seriousness of our situation, the future isn’t one of monolithic, inescapable doom. There are several futures ahead of us, just as today there are people who live side by side but inhabit different worlds; which one you live to witness will depend largely on what you do in the meantime. This nightmare exists precisely to the extent that we invest ourselves in it—every day we work for it, buy from it, and stake our lives on it, we are buying into the protection racket that keeps it the only game in town. Correspondingly, the world of our dreams exists to the exact degree that we behave as if we’re already living in it—there’s no other way it can come to be. The turning point for each individual is the turning point of society, in miniature. Don’t ask when or whether that point will come, but how you can reach yours; if you can get there yourself, everyone else can too.

When you really start to go for it, when your actions open a bona fide portal to another way of life, others will come out of hiding and join in. What, did you think you were the only one going crazy here? It takes an entire subjugated nation to keep things running, and there are plenty of others among that number who know how little they’re getting out of it. They are the millions who don’t get consulted for newspaper polls, who might pick you up hitchhiking but never appear on television. Ten thousand sleeper cells wait for the point of critical mass to arrive, ready to spring into action with their own yearnings to breathe free and private scores to settle, desperate for a war to fight in that really matters, a love to fall in that can command their attention—killing time and themselves in the meantime with anorexia and alcoholism, dead marriages and deadening careers. Every day each of us puts off taking the risks we know we need to take, waiting for the right moment to come or for someone else to make the first move or just feeling too beaten to try, we have the blood on our hands of every suicide who couldn’t hold out any longer, every ruined love affair that couldn’t endure in the vacuum, every sensitive desperado artist buried inside the corpse of a miserable service industry employee.

Next time the end of the world comes, we won’t be paralyzed watching it on television. We’ll be out there deciding for ourselves what comes next...

It’s not too late to live like there’s no tomorrow—all hope for the future depends on it. Say your last words now, and start from there with whoever joins in. Dreams do rebel and come true.