

The Cafe - Former

Official Organ of The Society for the Defense of Tradition in Pyrotechny

I.: O.: O.: J.:

“Magna est Veritas et praevalabit.” – I. *Esdras*, iij: 41.

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NO. 3

ALLOCUTION OF THE RT. VEN. BIANCO GASOLINI, P.:G.:C.:

The past year has been a good one for our order. Our position has strengthened within the P.G.I., and we have welcomed many fine new companions. Fences have been mended, and as so often happens, we have discovered that those we once thought of as adversaries really share our own views and objectives on a variety of matters. The P.G.I., on the other hand, still suffers some of the very ailments that the I.O.O.J. was formed in hopes of remedying. What, you may ask, has Bianco got stuck in his craw this time? Fair enough question...

It seems that in the past few years, the convention has turned from a gathering of fireworks enthusiasts to one of fireworks groupies and other weenies whose interest in pyrotechny lies somewhere other than advancing the craft through quality and showmanship. “Product demos” now offered every single night during convention week, seem to occupy a large part of the time that was once devoted to competition. Most of these consist of Chinese crap, or low quality domestic imitations of the same, with precious few decent shells to be seen. Most of these are musically “choreographed” with segments of crappy popular songs in the background. I’ve said it before, and I’ll say it again... good fireworks don’t need musical accompaniment or anything else. If your fireworks can’t keep the audience’s attention on their own, you’re doing a piss-poor job!

The “product demo” phenomenon leads one to wonder how we got ourselves into this situation, with a good number of wieners joining the guild and attending conventions just to watch a display every night. Most of the above wouldn’t know a good display if it bit them in the ass. Allow me to offer a theory – and I think that recent conventions have borne witness to this.

Those proposing convention sites feel that they have to promise whatever local body they are dealing with “six nights of fireworks” to sweeten the pot. In order for this to happen, they need to enlist display companies to deliver. What we end up with is six nights of commercial quality garbage. If I want-

ed to watch this kind of crap, I could save the cost of travel and stay at home. One of the P.G.I.’s stated objectives is to “promote the production and sale of high quality pyrotechnics”. I for one fail to see how massive displays of Horse brand material help in accomplishing this.

Perhaps what the P.G.I. needs is some sort of review committee, made up of those who are knowledgeable enough to pass judgement. Employees of commercial concerns should probably be disqualified to avoid a conflict of interest. Those proposing a “product demo” would provide a list of what they intended to shoot to the committee, which would then decide to accept or reject the proposal. Yes, I’m aware, more red tape, but for once it would serve to benefit the cause!

In addition, “product demos” should be limited to maybe three nights instead of six. At least the aforementioned wieners would not be around for the whole week, and some of them might quit coming altogether!

The wiener subject calls to mind another problem that has come to my attention. It appears that some guild members have been discussing the special effects shells known as lampare. These have been the subject of much verbiage on the Wienernet lately, (or so I hear from some friends who bother to spend their computer time on same). Apparently some of these sausages have even considered publishing a pamphlet on lampare construction. I can tell you on good authority (the best, actually) that this effect does not use lycopodium, or ChemFX, or mothballs, or any of the other horseshit methods I have heard mentioned in the Wienernet discussions. Lampare are very dangerous shells to build, and only those who have lots of experience in cylinder shell construction should attempt them. If you are well qualified, and have a track record of successful shells, ask me at a convention or other gathering! Those who are talking don’t know, and those who do know aren’t talking, at least not yet.

I enjoyed seeing all of our companions in Michigan. Keep those cylinder shells coming and may Vulcan smile down upon us all!

BIANCO GASOLINI

IMPROVISED CANNONRY

Some years ago I did work researching the characteristics of time fuse, and its possible value in replacing some of the countless circuits that many insist on connecting to each shell or effect, which, when involved in a large show, can run into thousands of commands. Ridiculous and unnecessary! Properly done, time fuse can replace many commands and minimize set-up time, since the fuse assemblies are connected to the shells in advance. Time resolution tends to be within a second over a period of about ten to fifteen seconds, when another command is usually necessary when firing to music. Of course the time of digitally-fired or time fuse-fired effects is only as good as the time fuse or spolette on the shell or insert, any deviation degrading the timing of even millisecond resolution digital equipment such as pioneered by our friend and illustrious companion, Ken Nixon.

Of course Ken is aware of this, so he calibrates his shell lift durations, as they are tested, into his programming. As we all know, it's damned nifty and unsurpassed.

Another aspect of timing is more philosophical than technical. When Handel wrote his Royal Fireworks Music, we weren't around to straighten him out on this timing business. And so it was understood that fireworks should be an approximate accompaniment to music or vice versa, instead of a rigid discipline of precision. It all depends on what you're looking for and how you look upon any specific show or effect. It's art, and there is no right way, but sloppiness and unpreparedness are most certainly the wrong ways.

The specifics of this sometimes miserably esoteric field are beyond the scope of this article, although I hope to coax the Master of Montréal, my long time friend and mentor, to help with a more elaborate treatise regarding timing and choreography.

Of course, time fuse can be cantankerous, and each roll has to be tested and calibrated because of sometimes slight, sometimes profound, deviations due to manufacture, shipping, storage, age, etc. There is no constant.

And so it was that I began testing Ruggieri time fuse in my back yard. I tape recorded the spits of each branch of quickmatch as it was ignited by the time fuse. Trouble was, I still had too many variables, such as quickmatch ignition to lift times. This was solved by using dummy shells, beer cans filled with sand, lifted and leadered like any other shell, and their times of departure from the gun recorded and analyzed. They fit perfectly down a 3" pipe. My backyard seemed big enough, and it wasn't terribly loud, so that's where I began the testing.

I suppose someone spent lots of other people's money to publish a study on what I discovered: You

can't always tell where a shell, gone blind, will land. When a can tore through my back porch awning and ripped away most of the gutter, I began lofting them into the woods behind my home.

Mystified by the coughs and smoke coming from my yard, Stephano paid a visit. He just shook his head when he saw me loading Miller Lite cans into a 3" rack. I could only grin sheepishly.

He scratched his chin pensively after watching a demonstration.

"How high do you think those things go?" Stephano asked. Good question. It depended on the lift, the fit in the gun, and amount of sand. I told him all this, and he asked "Do you think it'll reach my house if you angle it right?"

Our grins began slowly, like the coming of a dawn, and flared into enormity. Silently, simultaneously, we had invented a new sport: Neighborhood Artillery. We retreated to the laboratory, lifted and leadered a dozen beer cans, loaded them with sand, and tickled by the idea, prepared for an artillery duel.

Steve lived about 125 yards from me. I took an aluminum mortar from the rack and gave it to Steve. I told him to secure it well, and when I saw him packing it into a wheelbarrow full of top soil, I began to worry. I was about to call him and tell him about the violence of the recoil when I saw him light a Marlboro and start the quickmatch. The wheelbarrow pitched over, the mortar kicking out, and Steve's first round landed in the Giblin's driveway. Lucky nobody was home. We swept it up hastily and dug divots in our lawn, bricks underneath the mortars, tamped well, before we commenced again.

This time we launched from steady guns, observing the wind speed and direction, and making appropriate compensations.

Our first indication that this might be not so lightly taken came when I saw the smoke from Stephano's mortar. It was a fine spring day and the sun was high, and I followed Steve's shot until I lost it in the sun. I ran behind the garage, hugging it, and a moment later round hit the garage roof not fifteen feet from where I was, the roof being considerably the worse for wear. It didn't penetrate it, but it left a shallow crater and split the shingles; I got into the attic under the garage roof and found the plywood splintered. The next rain would be a bad problem. We mended it the best we could, resolved to stop this foolishness and talked ourselves into another duel within an hour. Damn it, it was just too much fun!

We continued to hone our skills to a frightening degree.

One afternoon Mrs. Flowarti was playing bridge with a friend who picked her up, so her Laguna station wagon remained in Steve's driveway.

As usual, we talked each other into a duel.

"Come on, Steve, what are the chances of my hitting the car? I've only got four rounds ready," I said. Not likely, Steve agreed.

As our giddy tradition dictated, we met in the middle of the road, projectiles in hand, back to back, and marched solemnly to our guns. At the flip of the coin, Steve got first shot. He was getting distressingly good at windage, and his first shot tore a large branch off our crabapple tree, disfiguring it badly. Well, my dad had wanted to cut it down, so I, his faithful son, would do it for him, and nobody would be the wiser. I wonder if George Washington got a similar start with his cherry tree.

I kicked my gun over just a bit, having watched Steve's shell catch a slight crosswind at its apogee, and fired at his mortar emplacement. As soon as I saw it clearly, I saw that my shot would be close. It hung in that quartering crosswind a moment and, calculating its trajectory mentally, I began to writhe. My body English must have made me look like I was performing deranged Tai Chi, twisting on tip-toe and milling my arms left, hoping without hope that the breeze would carry my shot past Mrs. Flowarti's Laguna. Yet I watched helplessly as it plunged into the hood of the station wagon. It was a sickening, crunching sound that I'll never forget, as it hit.

Steve walked over, looked at the car, and cringed. He shuffled back to the stone wall bordering the driveway, slumped over, and I shambled over to inspect the damage.

The hood was caved in, and there was no possible way to explain or repair it. The cavity was full of sand, the majority of the windshield and roof spattered with it, and in the crater I could make out the words, "Less filling, only 96 calories."

We considered driving it into something that would wreck the car further obscuring my hit, but even we had a faint semblance of conscience.

I told Mrs. Flowarti the truth, sort of. I said one of my experiments had gone wrong, and Steve was not to blame. Her wrath was monstrous, and I took it humbly, fixing the car out of my own pocket. After all, what insurance company would believe her?

In a field in South Alabama, fourteen years later, I watched Blandford Holiman dig a shallow hole, insert a stick of 40% dynamite into it, and cover it with a 55-gallon drum with the bottom cut out. It was just like when we put firecrackers under tomato juice cans, only bigger.

The drum spun higher than I thought it could, and, history repeating itself, was lazily eased toward Wayne's Ford pick-up truck. Need I say more?

This sort of makeshift artillery is fine sport, and I hope you enjoy it. But leave lots of room, friends, because if it can happen, I promise you, it will. ☘

— EDUARDO TELLERINI

MISOGYNY BY PROXY OR WHO SAYS PYRO AIN'T SEXY?

"Hey, Ace, who do you know that welds?"

"Stan is great at welding, why?"

"Come on over and I'll show you. It will probably go 'boom' when we get it built."

I had barely hung up the phone and gone back downstairs when the front doorbell announced Ace's arrival. (I could hear better in those days.)

Ace and I were fishing, smoking and M-80 shooting buddies when we were kids. We weren't kids any more. I was thirteen and he was twelve and we knew quite a bit about the world already. We were convinced of that.

I had been harboring the plan every since I learned how to mix gunpowder in my basement in what I called the chemistry room. It actually served as a place where Ace and I could smoke, shoot the breeze, and gaze at Marilyn Monroe reclining nude on red satin in her famous calendar pose.

When Ace got downstairs, I proudly handed him a paper sack. He opened it and his eyes widened as he viewed the missing piece to the plan that would separate the firecracker boys from the "demolition experts" — six feet of orange dynamite fuse.

In those days, we didn't have any idea how to get fuse locally so our plans for the "big boom" had been on hold.

"Where did you get it?" Ace asked incredulously and I imagined with considerable admiration.

I related how when I was on vacation with my parents and twin sister the past week, we had stopped for a lunch break in Leadville, Colorado, a famous silver mining town. We found a cafe on the north side of the street but we had to go around the block to find a parking place. As we circled the block, I spied a sign in the window of a hardware store indicating that they sold mining supplies and blasting equipment.

I gulped down my hamburger and excused myself on the pretext of walking off some intestinal gas or something, rushed up the street, entered the store and asked the store keep how much he got for dynamite fuse. At six cents a foot, I bought all I could with forty cents.

I was pleased with my foresight in leaving the door to the back seat of the Buick unlocked. I arrived at the car before my parents and twin sister and slid the bag of fuse under the front seat where it remained until we arrived home.

Meanwhile, back at the chemistry room, Ace said he could get pipe welded for us and would have it plugged by the weekend, which he did.

Friday evening after school, he brought up the pipe. What a piece of work! Stan had welded a large valve into the one end of the 2-1/2 foot pipe, 3 inches in diameter. The rest was up to us. We accepted that assignment with pleasure and anticipation.

First we poured eight inches of homemade black powder, the ingredients for which we got from the local drugstore, then we placed the fuse and poured in another eight inches of powder. This was followed with some tightly packed crumpled newspaper, then some mud from the ditch out in front of the house.

There it was. Our first large (I keep wanting to avoid the word, but what the hell!) BOMB. In those days, these types of things did not bear nearly the weight of "political incorrectness" that burdens them in our present society. We swept the floor, had a smoke, gazed at that famous calendar longingly and made plans for meeting a mile north of town out by the river the following afternoon. I would bring the pipe and Ace had the smokes.

When I arrived, Ace's bike was already there. We unstrapped the loaded pipe from the rack on my Schwinn and walked west into the woods. We hadn't decided where to place the charge but as soon as we saw "THE TREE" we knew where it needed to be. The trunk of a young cottonwood was twenty-four inches in diameter and rose three feet out of the ground and split into two equal limbs about 18 to 20 feet long forming a 35 degree angle. Talk about sexual aggression. At that time, neither one of us was getting along very well with his mother due to suspicions of our smoking and firecracker shooting. We were both as horny as two barely pubescent virgins with a calendar fixation could be. All that crotch lacked was hair. But then so did Marilyn, or at least it didn't show.

We lodged that pipe snugly between the two limbs. After we had found a large depression behind a tree about 60 feet away for retreat and cover, we lit the fuse and "retired quickly" as the fireworks of our day advised.

We lay waiting and waiting and WAITING! Do you have any idea how long a foot of dynamite fuse takes to burn? We knew because we had timed it. Unfortunately neither of us was wearing a watch.

About the time we were ready to investigate what had caused the misfire, it went off. What an explosion! The ground shook beneath us and following the tremendous boom, we could hear numerous objects slicing through the woods over our heads. Those sounds made us grateful we had chosen good cover.

We ran up to see the results of our work. Numerous trees in the vicinity of the explosion had pieces of metal sticking out of them. Many leaves had been blown off surrounding trees by the blast wave and the tree we had chosen for our first big adventure was rent asunder. The crotch was split to the ground and both limbs were lying there as if in complete supplication.

We looked at each other with unmitigated satisfaction, probably not fully realizing why. This was a turning point in our lives. Our first maidenhead, albeit an arboreal one.

We may not have been completely aware of the symbolism of that tree at the time but we have both been trying to repeat the act ever since.

RENT ASUNDER.

— PULSAR



De omni re scibili, et quibusdam aliis.

—VOLTAIRE

I am in despair over being apprehended for a long string of successful mail-bombings. I planned everything so well, yet my own family turned me in. Help!

— TED KACZYNSKI, Block C-4, Cell 18
#621086, Sacramento Fed. Corr. Fac.

Dear Ted,

Take heart and have hope. You did indeed amass a fabulous string of unsolved bombings. I'll bet you hold the record, but I'll check to be sure and let you know.

You also made some fine improvements technically, boosting your kill ratio dramatically in recent times.

Don't give up hope, Ted. Hell, if O.J. Simpson can walk away from his bloody carnage, you've certainly got a chance. Try writing a book so you can hire the Dream Team, and when you're acquitted, send a little thank you package to your rat of a brother.

But just in case things don't work out that well, why don't you write me with his full name, address and zip code. I'll take care of the rest.

— EDUARDO

A LAST MINUTE THOUGHT

The bikini is fifty years old this year, yet the origin of its name is obscure. Many thought it the garb of the natives of the Bikini atoll, where we tested our first nuclear and thermonuclear bombs. Not so. An obscure French fashion designer was inspired to name his radical new swimsuit after seeing a newsreel of our nuclear tests in the Bikini Islands.

"Not much left," he observed.

— E. T.



WAY OFF THE INTERNET

Mihi quoque spam dedisti.

— with apologies to THOMAS OF CELANO

By now we suspect that there is not a pyrotechnist (nor, for that matter, anyone else) who has not

heard of the Internet. Indeed, its publicity is hard to escape – and who cannot have noticed, amidst the perfervid attention given in the news media to the immense volume of pornography available on the Internet, that there are also “bomb making” instructions on it? This news, if nothing else, might prompt investigation. Those who have bothered to examine the pyrotechnic resources available on the Internet may, perhaps, have been disappointed if they were looking for detailed instructions on blowing up buildings or the like: what is available electronically along these lines is, at best, no better than what one might find in an Army field manual, and, more typically, is likelier to provide a swift, if messy, way of committing suicide.

On the other hand, people interested in fireworks will discover that there are several well-developed venues for pyrotechnic discussion which have their own unique character. Here, the eager newcomer may be treated to lengthy disquisitions by a seasoned group of armchair pyros. These people will take the novice in hand and guide him to a proper apprehension of the peculiar mores of pyro-in-cyberspace, where one’s reputation as an authority is proportionate to the extent of the sententious blather one posts. They will readily censure any trespasses against the unwritten “netiquette*,” such as a failure to pay deference to the holder of an academic degree even in the absence of any evidence as to its relevance to pyrotechny or the actual pyrotechnic accomplishment of its owner. Stern defenders of established order, these sages resolutely enter the fray on behalf of poor beleaguered regulators and lawyers, ruthlessly putting down any upstart who might question the wisdom of our laws and regulations, or the need of certified Experts to interpret them.

To the end of furnishing our readership with a glimpse of the typical dialogue to be found on the pyro forums of the Internet, we have inaugurated a new column, dedicated to the publication of extracts from these vital exchanges. We hope our companions will welcome this new addition (or, at least, forgive the editors).

— PASQUINO DEI FUGISTI

* * * * *

From pig@vnitwit.net Wed Mar 13 13:13:13 1996
Date: Wed, 13 Mar 1996
Reply To: pig@vnitwit.net
Originator: pig@vnitwit.net
From: Pukie Needlegrin <puke@needle.dork.com>
To: Multiple recipients of list <pig@vnitwit.net>
Subject: Re: Fireworks in the 90’s – comply or get out!

In a message dated Fri. Mar. 8, 1996
J. Johnson of Albany, NY wrote:

* For an authoritative treatise on this subject, vide *Valentine, B.M., The Triumphal Chariot of Acrimony, 1995.*

>There is a rumor circulating within the pyro
>industry that certain infamous individuals, who
>have recently been ostracized by their peers for
>similar activities, are secretly pushing for
>legislation within the D.O.T., B.A.T.F. and E.P.A.,
>to ban the use of paper packaging in all
>commercial fireworks. These individuals are citing
>numerous incidents of personal injury from paper
>burns and millions of dollars in insurance claims
>on property damage annually, to plaintiffs, that
>could be avoided with the use of more politically
>correct plastic packaging materials.

>I am outraged at the notion of having to give up
>my craft and business or acquiesce to this idiocy
>that these so called experts are jamming down
>our throats. Not only is this an outrageous
>directive, but it is being perpetrated by a small
>band of scoundrels who have thrived on the pyro
>hobby and commerce for years. This band of
>regulatory panderers is being lead by the one
>Kon Kospankme who is notorious for these types
>of selfishly motivated agenda.

>Let’s band together and “throw the bums out” of
>our sight once and for all before we experience
>the total demise of our pyrotechnic arts.

>James

Dear Mr. Johnson,
Wo-Wo-Wo, take a big tranquilizer and settle down, you are obviously an emotionally bent individual who defends law breakers and the extremely dangerous manufacturing practices of the past.

First and foremost, I know of no rumors circulating that you have indicated as most of us already are aware of the facts in this matter. It is public knowledge that the use of paper packaging has already been banned from the commercial sector and will go into effect August next, so why you say there are rumors is beyond me.

This attempt to mandate better safety guidelines within the industry is supported by most whom I have had the pleasure of corresponding with even within the PIGG organization there is overall support for this new scientifically sound safety measure. You, my friend, are way out of line with your statements and accusations that I find offensive and off topic to this listgroup.

it is people like you who rush to judgment and attempt to spin the issues with emotion while attacking the character of those who have done so much for our hobby. You attack the very same people who have made our organization a more opportunistic place for all and you’ve essentially

driven away many with your profound support of Draconian techniques for making fireworks.

May I suggest Mr. Johnson, that you get a clue and either climb aboard the 21st century pyro train or relinquish your interests in our hobby to the more intellectual element before you ruin it for all.

Let's not allow ourselves to bicker over these issues as it does no good for our image, especially in this age of capitulation that has brought us closer to our friends in the regulatory world. We need to maintain and build our trust with our colleagues in government in order to be viewed as a viable and professional group, lest we be divided.

Pukie

* * * * *

From pig@vnitwit.net Wed mar 20 20:20:20 1996
Date: Wed, 20 Mar 1996
Reply To: pig@vnitwit.net
Originator: pig@vnitwit.net
From: Bark Moodah <barkmo@iam.astar.dork.com>
To: Multiple recipients of list <pig@vnitwit.net>
Subject: Re: Fireworks in the 90's - comply or get out!

In a message dated Mon. Mar. 11, 1996 J. Johnson wrote:

>The implications for the recent ban on paper in >fireworks are much deeper than its legislative >panderers want you to understand. This ban >mandates the total elimination of ALL paper >products used in the the manufacturing of display >fireworks, yes I said ALL!!!

>This means folks, that there can no longer be >any paper disks, spolettes, fuse, casings, >saettines, lambette, tourbillions or any other paper >finish wrap in or on your shells. You must now >acquiesce to this idiocy of total plastic compliance >or be subjected to stiff fines and possible >revocation of your manufacturing license.

>J. Johnson

I just wants to make it clear that to everybody the law says we must listen to them as they know what they are talking about and have much more experiance then we do combined knowledge.

If one wants to talk about this subject more he can see all on Tin Pigeons home page <http://birds.brains.calif.u> or can read about it in the new JoP (Joys of Pyrotech-Nots) to be available

to all soon for \$49.95 pp from Kojinxme Ent. Connme CO.

We need to make laws more repressive toward amatures and push for more kospankme courses to be made mandatory for PIGG'ers. It this will make more people knowledgeable toward fire works that are what we need for the future. These people are smart and they knows what they are talking about. The insurance rates will go up too if we don't get rid of paper to make fireworks with.

This comes from personel communications with my hero kk who is knot dumd about these things at all. I think people would be very surprised at how many people are doing this stuff illegal in their kitchens and baby's bedroom (not like I do it though) and so I we must do mean whats we say and vote on all the time. If they know what problems could occur they wouldint want to use paper anyway.

Bark Moodah

* * * * *

From pig@vnitwit.net Fri Mar 22 10:20:18 1996
Date: Fri, 22 Mar 1996
Reply-To: pig@vnitwit.net
Originator: pig@vnitwit.net
From: Cheezee Wheezel <cheez@wheez.sleez.beezness.chum>
To: Multiple recipients of list <pig@vnitwit.net>
Subject: Re: Fireworks in the 90's - comply or get out!

In a message dated Thur Mar 21, 1996 Sue Meelater wrote:

>I am relatively new to the PIGG org., but have >co-owned and operated a substantial >manufacturing and display business for the past >15 years which was taken over from my father >when he passed away.

>Our commercial fireworks business has been in >the family for over 100 years manufacturing and >displaying a wide range of paper constructed >multi and single break cylinder shells of the 3 >inch to eight inch variety. We rely primarily on >the traditions which were passed along to our >current manufacturing staff in order to prosper >and survive.

>I am very concerned about the future of my >business and the pyro field in general with all of >these new regulations bearing down hard on us. >I cannot survive, nor would I want to, if we >couldn't make those intricate and beautiful multi >break Italian style shells or those heavy hitting >reports that our customers have come to rely on >as real crowd pleasers.

>I just don't have the time and luxury to travel
 >around the country to fight off these regulations
 >which are being proposed by some of our very
 >own members, those who have the knowledge to
 >know better and who have taken on a disposition
 >that is unfavorable to the traditionalists and
 >hobbyists among us. These regulatory bum
 >kissers have really done great harm to the
 >industry and have exploited us with their insider
 >knowledge of our craft. This is the most
 >disturbing aspect of the whole issue that I find
 >appalling and beyond repression.

>Is there a solution? Is there hope for survival?
 >I hope that there is still enough passion out
 >there to defend our rights and traditions against
 >this wave of regulatory smoochers and their
 >selfish pursuits. I hope we can collectively save
 >our businesses and maintain a future in fireworks
 >for generations to follow.

>Sue M.

Well, well, well Mizz Meelater, I am taken aside on those of us who have done so much for improving the level of safety in our pyro community. You are not grasping the total concept of the socioeconomic implications for allowing the continuance of such antiquated manufacturing practices that you claim are essential for a viable future in our trade.

Don't be blinded by your own selfish ambitions in an industry that thrives on the sound leadership hierarchy that can only be born from intellectual monoliths whose philosophies have manifested themselves into the high tech age of pyrotechny that we espouse today. Without those, whom you vehemently condemned with your vile and vindictive words, we are a society of misfits and incompetents who are bent on nurturing anarchy and lawlessness.

Science has proven that your ways are outdated and dangerous, never-mind selfish, under the esteemed safety initiative that has been spear-headed by our great leader. Your quest to hold onto these archaic techniques and practices is out of line with reality and shows your true ignorance in this highly technical field. Most, if not all, of the real pyros have accepted the world of plastic which you have denounced. No one person that I am aware of manufactures the dangerous multi-breaks anymore. All of the successful companies today have transitioned over to the new order of single break – smoke less – non toxic – all plastic ball shells. Wake up mam, and smell the fresh air of PC pyro or be remembered in history as a non-conformant rabble-rouser.

I am truly amazed that the mindset of people like miz Meelater continue to flourish in our scientifically advanced society with all of the great advancements graciously given to our field by the profound experts of higher learning. Some people continue to hold onto their barbaric ways even though we have informed them of a much safer and controlled path with which they could follow.

Cheeze (if it doesn't have a bottom shot, it is in compliance)

* * * * *

WANTED: Moderator for wreck.pyrotechnics news groupies. No actual hands on experience required. Must be able to use a Merck Index and CRC, and preferably own a current edition. Ability to string together technical phrases that look impressive to novices a must. PhD highly desirable, field not important. Must be able to defend other PhDs from the slings and arrows of other, less educated pyrotechnists, whether their complaints are valid or not. Get in on this ground floor opportunity-franchises soon to be available! Advance your career! Etc...

NEW BEST SELLER!

***Creative Woolgathering:
or, How to Stay Warm in Cyberia***

by Marvell Marplot, Ph.D.
Adjunct Professor of Invective, Department of Pomposity
Podunk University, Podunk, Ohio

Learn these valuable survival skills:

- ▶ How to pursue personal interests when you're supposed to be working!
- ▶ How to stay on the tenure track at your State University while so doing!
- ▶ How to charge it all to the taxpayers!

*"Oh what a tangled Web we weave
When nary a 'phone bill we receive."*

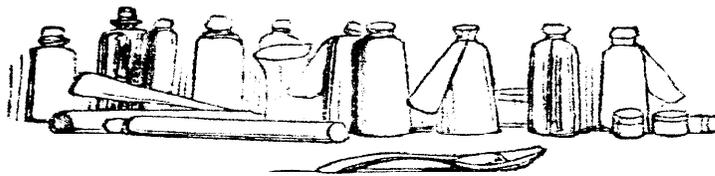
Only \$35.00 + \$2.95 shipping & handling

E-Mail us at: <http://www.dont.bother.com>

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Galinitropyromedica



The author had some difficulty in deciding upon a subject for this edition. Like the readership he is anxious to start on the heavy metals – ever so politically incorrect and some of the most versatile items in the lab – but it might be best to save these old friends for later. Gums, resins and the like certainly deserve some attention as well. Then there are items which may have minor uses but simply aren't inspiring enough for a whole article, such as clay for rocket nozzles and for diarrhea brought on by convention food. Calcium silicide makes hot prime and sand may be employed in pull igniters, but in general silicon is one of the more useless elements in the periodic table, significant only in a negative sense when it gets where it doesn't belong.

There are some exciting chemicals in the realm of nitric acid and the nitrated organic compounds, so we may as well begin with the acid itself. As might be expected, the medicinal uses of aqua fortis are few but the results can be quite dramatic. At one time it was fashionable to give it internally, well diluted of course, in a variety of ailments. One physician who recommended it in whooping cough was a namesake of the famous Bristol gunmaker, George Gibbs. But as Dr. George Wood noted in 1867, "I have seen nothing which might not be ascribed to its simple tonic action on the digestive organs."

Nitric acid really shines for destroying pathological conditions of the skin, ranging from naevus to some forms of cancer. In concentrated or fuming form, it was once a popular treatment for everyday warts. Now in this safety-faking and ambulance-chasing age, one can go into a drugstore and find all manner of trade named wart removers, but critical inspection will reveal that virtually every one of them contains salicyclic acid. At best this must be applied faithfully for many days to give any hope of a final cure. An older doctor or a very indulgent druggist might provide a sticky brown solution of podophyllum resin in tincture of benzoin, which is bound to be dispensed with warning stickers suggesting that it is mighty stuff indeed. This preparation may be adequate for plantar warts (its original purpose) but for general use the author has found it disappointing. It is slow, when it works at all, and a few missed applications will allow the wart to grow right back to its original size.

Nitric acid is another story. Its application time is

measured in seconds, not weeks. It is what John Wayne would have used to remove warts if the subject had ever come up in western movies.



One week after treatment with HNO_3

The first order of business is to protect the surrounding healthy skin with a thick layer of petroleum jelly, mounding it up to that the wart is visible in the middle like the crater of a volcano. (The author once tried lanolin and regretted it; the warmth of the skin and action of the acid spread both grease and acid where they were not supposed to be.) When the little hollow is filled with acid from a dropper, smoke or fumes will issue from the hapless wart as it goes the way of all flesh. Half a minute is a typical application time, although it will vary from case to case. The process is basically self-regulating, because as the acid reaches the healthy tissue underneath, the patient begins to feel a distinct urge to be somewhere else.

It is wise to hold out as long as possible in order to do a thorough job. Then wash with cool water and rub gently with bicarbonate of soda (or potash), which will neutralize any acid in the spongy remains of the wart. Nitric acid burns heal slowly but rarely become infected. They often develop mild inflammation and "laudable" pus because of the odd structure of the wound: the first scab which forms is down in a hole and acts like a foreign body, putting pressure on the healthy tissue above. There will be three or four scabs, each one successively higher, until the last is flush with the skin.

Incidentally, before Pasteur developed rabies vaccine in 1886, the only halfway trustworthy way to



prevent the disease after a mad dog's bite was to cauterize with nitric acid. The vaccine was a real improvement, but today, predictably, things have gone to the opposite extreme. Pasteur's trusty duck egg virus culture method has given way to a process using cultured human cells, which was originally devised as an alternative for people allergic to duck proteins. The modern

health system, with welfare and insurance for encouragement, has a way of seeing that such exotic specialties become the standard. Not long ago a man in the author's county was bitten by a rabid horse, and it was decreed that his entire family was to have rabies shots because they had all fed the animal or fitted it with a bit. The human cell vaccine was the only kind available, and while the victims had no religious objections to it, the cost was \$2200 each.

Of the three important classes of nitrated organic compounds, the nitroamines have seen the least medical use. "Cyclonite" was recommended by its discoverer, according to T. L. Davis, but it is probably just as well that it never caught on. Such compounds and their reduction products, the nitrosamines, can cause cancer, and they do not appear to have any virtues which would justify the risk of taking them internally.

Organic nitrates or nitric esters dilate blood vessels, making them useful in angina pectoris and in acute episodes of hypertension. Nitroglycerine is by far the most famous of these, and has been offered in dosage forms ranging from the old "Spirits of Glonoin" to injectables, timed-release capsules, sprays, and transdermal patches. Most readers will have seen the tiny, sugar-based sublingual tablets, which allow the drug to enter the circulation rapidly through the thin membranes under the tongue. Other nitric esters, including PETN and nitromannite, have been sold as commercial medicines, and all these compounds do the same thing with slight variations in the onset and duration of action. It is the profitability of trade names which makes them come and go. Isosorbide dinitrate, under the names "Isordil" and "Sorbitrate", swept the field a few years back but is now available as the generic drug from a dozen different makers. The patent drug firms had to go back to work, and now the fashionable young doc-

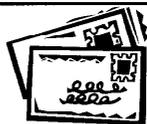
tor simply must use "ISMO", which is isosorbide mononitrate. Thus does science advance.

Aromatic nitro compounds have been used for a variety of purposes. One of the more peculiar of these is that 2-, 4-dinitrophenol was introduced in the 1930s as a weight reducing agent. Because it blocks the controlling enzyme of a vital step in fat metabolism, it is dramatically effective - so effective in fact that people who could not use it with discipline often would up in the morgue. Before it was removed from the market it, too, inspired the me-too phenomenon, with a British drug company attaching a brand name to the ridiculously similar 4-, 6-dinitro-orthocresol. Strange as it may seem there could be yet another chapter to the story. This year while visiting a home with a television set, the author caught the tail end of a broadcast about a powerful weight loss drug from Europe. While he did not hear all the details, the product was apparently dinitrophenol attached to some sort of inert "carrier" molecule. A panel of experts was discussing its possible introduction into the U.S., and how the F.D.A. should respond! This would not be so odd except for the fact that the F.D.A. is the same bunch trying to remove such harmless items as pepsin elixir and fish-tar ointment from the shelves, merely because nobody in his right mind would buy \$300,000,000.00 worth of "studies" to save them.

Picric acid is rightly the most famous of the multipurpose nitro compounds. It is a good antiseptic, with an especially high reputation in burns, and it sometimes relieves severe itching in such conditions as eczema. For deep burns of the face it should be avoided as it may cause permanent scarring. Otherwise a 1% aqueous solution is the most versatile preparation; 1/4 to 1/2% has been used to treat gonorrhea. Picric acid cotton, gauze, and wool were once available but are now a home-brew proposition. Alcoholic solutions up to 5% strength may be used in superficial skin conditions but not in deeper wounds. Finally a 2% ointment is useful on the skin and for burns of the eye. Although the author has never tried it, stains are supposedly removed by washing with dilute ammonia followed by O.T.C. hydrogen peroxide.

One will not find picric acid in the junky, high-volume chain stores, and the safety-fakers have cleaned it out of the school labs years ago. By haunting enough old drugstores with dusty, cluttered basements one may walk away with a bottle of the high-grade stuff. It is rarely used in whistles today because of the mess and expense. Still, there is nothing else which can be used for high explosives, propellants, whistles, deep colored stars, and for treating the burns if one has any mishaps. Safety-fakers in both fields hate it, and that alone is reason enough to keep it around.

— SCOPPIETTO DULCAMARA, I.O.O.J.,
B.M., B.Ch., B. Pharm., P.G.I., etc.



Quodlibeta

...I'll get straight to the point - I found an article that appears, for all intents and purposes, perfect for the next edition of the *Case-Former*. It is from the January, 1996 edition of *Harper's*, and called "Blazing Saddles (Obliterating Animal Carcasses with Explosives)." It speaks for itself, especially the part indicating "...where total animal obliteration is necessary, it is advisable to double the amount of explosives used in the first two examples." That means 100 pounds of high explosives!! What is the hell are they talking about? Don't you think 30-40 lbs. of flash would do as well?

— E.E.



BLAZING SADDLES

From "Obliterating Animal Carcasses with Explosives," by Jim Tour and Mike Knodel, in the January 1995 issue of Recreation, Engineering Tech Tips, a newsletter published by the U.S. Forest Service. The article appeared in the November/December 1995 issue of Annals of Improbable Research, published in Cambridge, Massachusetts.

There are times when it is important to remove or obliterate a large animal carcass (horse, mule, moose, etc.) from locations such as a recreation area, where a carcass might attract bears; a popular picnic area, where the public might object; or the side of a road or trail. Large animal carcasses can be particularly difficult to remove, especially if they are located below a steep slope or in a remote area.

We have found that explosives have been used successfully by qualified blasters to obliterate large animal carcasses partially or totally.

In a case where urgency is not a factor — perhaps the public is not expected to visit for a few days, or bears will not be attracted to the carcass — partial obliteration is acceptable. The following instructions apply to a horse weighing about 1,100 pounds:

- Place three pounds of explosives under the carcass in four locations (see Figure 1).
- Place one pound of explosives in two locations on each leg.
- Use detonator cord to tie the explosive charges together.
- Horseshoes should be removed to minimize dangerous flying debris.

In some cases it is not practical to move the carcass onto the explosive charges; for

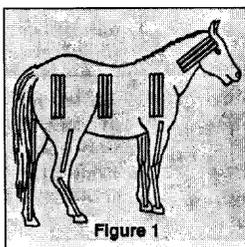


Figure 1

example, the carcass may be lying in water or frozen in the ground. In such circumstances, fifty-five pounds of linear explosives can be simply draped over the carcass (see Figure 2). Use of the entire fifty-five pounds of explosives will provide more obliteration than in Figure 1.

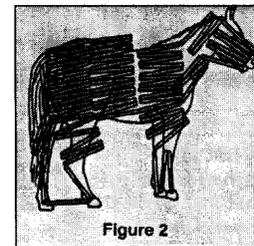


Figure 2

In situations where total animal obliteration is necessary, it is advisable to double the amount of explosives used in the first two examples. Total obliteration might be preferred in situations where bears are particularly prolific, or where the public is expected in the area the next day.

SYMPATHETIC DETONATIONS

News Notes From All Around

The Shooting Times (U.K.) for 12 September 1996 carried a short article which we excerpt here as of possible interest to readers of our articles "Flaming Clays," by Ernst Pfantodt, and "The Day the Pigeons Shot Back," by T. Babington Brimstone (in Vol. II, No. 2, October 1993).

A SHOT IN THE DARK

It is rare that the telephone rings in the "Shooting Times" office and we are asked to try something completely different. However, once it had been fully explained, clayshooting at night just had to be given a try.

With the editor in tow, a watchful eye was kept on the diminishing light as we made our way to a farm in the heart of rural Worcestershire, where the innovation has become reality and spawned the birth of Shooting Star Clays Limited.

The system uses standard clays painted with special luminous paint. They can be launched from any manual or automatic trap with only minor modification. As the clay is launched a strobe is triggered and charges the paint which continues to glow brightly for the entire flight time.

The result is a brightly glowing disc, hurtling through the night sky like something from a science-fiction film. The targets can be shot with a standard gun and ammunition or with the aid of tracers and the addition of luminous sights. The target bursts like a firework when it is hit, filling the sky with brightly coloured shards of clay.

The two men responsible for the lengthy process of turning the original idea into practice believe it will be invaluable to shooting grounds in winter that have permission or shoot late. The main strobe unit costs £160, with clays costing slightly more than blaze but less than flash targets. Un-

broken clays can be re-used and the paint is water-based and non-toxic.

The flash made by the trap when the clays are launched gives the impression they are being fired out of a cannon. When the system was demonstrated at the World Championships at Goodwood, the response was very positive. Many grounds showed an interest, but it was the international contingent who were most enthusiastic.

The system is weather-proof and works off a standard 12-volt battery. The clays can be left on the trap during daylight without any adverse effects. Shooting Star Clays are a lot of fun and spectacular when hit.

The system will be demonstrated at the Midland Game Fair, Weston Park in Shropshire on September 14-15. A further demonstration is to be held at Lakenheath Rod & Gun Club in Suffolk. For further details contact Rupert Checkley or Andrew Greenhalgh on (01299) 832144.

Noting that luminous paint is rather milkwater in comparison with burning pyrotechnic composition, we must acknowledge that it is also more practicable in many locations – and we view with approval the suggestion that the luminous targets be shot “with the aid of tracers.” We have nighttime baseball and football, so why not a nighttime sport for devotees of the scattergun? Finally it is intriguing to speculate whether Andrew Greenhalgh, one of the inventors of the “Shooting Star Clays” system, could be a member of the Greenhalgh family that formerly owned Standard Fireworks in Huddersfield?



The *Shooting Times* (U.S.), a very different publication from that mentioned above, carries a monthly column by Jerry Constantino with a regular department on “dumb crooks” – sort of like a cross between “News of the Weird” and the police blotter. A couple of items of pyrotechnic interest have appeared in recent columns:

- My favorite this month is the guy who owned a pile of smoldering metal imbedded into the side of a cliff at the apex of a curve, high above a desert road. The Arizona Highway Patrol said the wreckage resembled an airplane crash, but a closer look told them it was a car. The lab guys had to figure out what kind of car and what actually happened.

It seems the driver had somehow acquired a JATO unit (Jet Assisted Take Off), it's actually a solid fuel rocket used to give heavy military transport planes an extra “push” for taking off from short airfields. He set out into the desert and found a long, straight stretch of road. Then he attached the rocket to his Chevy Impala, jumped in, got up some speed, and fired off the thing!

Best as the authorities could determine, he was doing somewhere between 250 and 300 mph when he came to that curve. What about the brakes?

They were completely burned away in a fruitless attempt to slow the car.

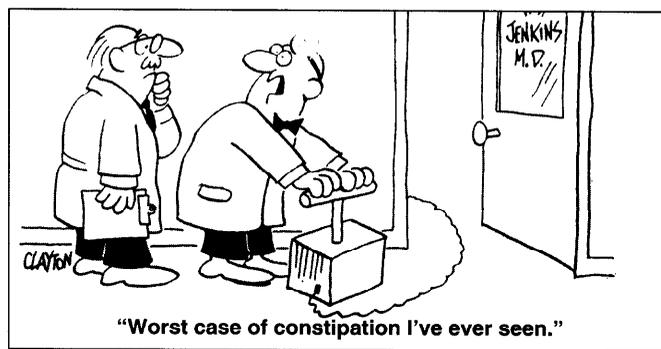
Remember: Solid fuel rockets don't have an “Off” switch. Once started, they burn at full thrust until the fuel is gone. (*January, 1996*)

- In England burglars trying to break into a fireworks factory used a torch to open the door. Sparks, however, ignited the crooks' van which was parked adjacent. The van then sent more sparks and flames into the factory, causing tons of fireworks to explode. The robbers have been dubbed the “hole in the ground gang.” (*March, 1996*)



We are pleased to hear the report that two companions have recently succeeded in making the dreaded potassium picrate whistle compositions without more than a few spotty stains, much less the great yellow streak demonstrated by most recent “experts” who have never tried it, and hardly any more bitterness than a typical P.G.I. business meeting.

The picrate whistle mixes tried, from a trusty late nineteenth-century formulary, were potassium picrate by itself; 3:2 picrate and saltpetre (a good “normal” whistle that compares favorably with the present benzoate mixes and works admirably even at 100% relative humidity); 3:2 picrate and barium nitrate (“*sifflet aigu & perçant*”); and, most intriguingly, a mixture of 15:1 picrate and the resin of Socotrine aloes. This last gave a good whistle, with plenty of black smoke (like picrate alone) but burning more stably. We note that a recent article in the *Journal of Pyrotechnics*, “An Introduction to PROPEP” (Vol. I, no. 1, p. 11) featured a “computer modeling” program in which phenolphthalein (the principal ingredient in “Feen-a-mint” and “Ex-Lax”) was advocated as an ingredient in rocket compositions, although the author of the article never actually tried it (at least in fireworks!). On the other hand, the *resounding* success of aloes in whistle mixes proves by empirical demonstration that, if one wants to use laxatives in fireworks compositions, one ought at least to go back to a respectable century and get a formula that works!



Pyrotechnic Farts & Sausages Publishing proudly announces its new book, *The Compleat Wangler: How to Take 'Em Hook, Line and Sink*, by Charlatan Wheeze (still in preparation).

MUSINGS ON THE "UNABOMBER" AND SOME OF HIS PLAYMATES

*Their webs shall not become garments,
neither shall they cover themselves with
their works: their works are works of
iniquity, and the act of violence is in
their hands.*

—ISAIAH LIX:vj

The arrest of the suspected "Unabomber" earlier this year, coupled with the nation's overweening obsession with electronic message networks and electronic gadgetry in general, struck a chord in this author. Although the Unabomber was originally named for attacking universities and airlines, he seems to be known best as a modern-day "Luddite" because of his dislike of computers. Although the Unabomber is considered far left, and the author's own political stance would be characterized as far right, our reactions to the computer-age mindset are equally negative. In case any federal agents are reading this we will mention that we did *not* know Ted Kaczynski personally. But in all candor we might not have turned him in if we had, and this realization has prompted a little soul-searching. Some of what follows may not be directly related to pyrotechny, but as Donne observed no man is an island, and in an intensely regulated, homogenized, mass-marketed culture it is becoming difficult even to be a peninsula.

At the very least we ought to ask ourselves why supposedly "conservative" elements in our society are rushing to make themselves dependent on absurdly complicated gadgetry for even the most basic tasks, and practically falling over each other to see who can wallow deeper in the mire of the latest electronic medium, as though we did not have too many electronic media already. At one level the answer is simple — the quick buck — but even moneygrubbers are not the men they used to be. An honest crook like "Public-be-damned" Vanderbilt would probably disdain those who use regulators, lawyers and insurance companies to force people to buy their products.

In this author's opinion the highly touted "computer revolution" reflects an unholy alliance of the worst elements of big business and consumerism on the right, plus big government and social crusading on the left. Both sides are bad enough by themselves, but when they are allowed to feed on each other the result is sheer madness. Computers can be advantageous in certain industrial processes such as printing or controlling machine tools for mass production. They were originally designed, of course, for extremely complex calculations, but most people don't use this level of math in their daily lives. "Paperwork," regardless of how much real paper is involved, has a negative connotation because it is usually something forced upon us by some mindless bureaucracy. "Information", on the other hand, has been endowed

with a glamorous image by self-appointed futurists, not to mention people selling "information systems." Regardless of semantics the majority of computer use by businesses, especially smaller ones, is an effort to cope with the ever-increasing burden imposed by regulators and other meddling third parties.

Upon seeing a computer in a clinic or a pharmacy the layman, especially if he has read too much trendy health literature, may have visions of a patient's metabolic rate and kidney function being used to calculate the ideal drug regimen. While such is possible, and does not require more than moderate skill in mathematics, it is really only done in a tiny minority of cases. Ninety-nine percent of the time the machine was bought to keep track of billing, especially coverage under welfare and insurance programs, which constantly change their rules and are notorious slow-payers. The percentage of medical costs which goes for record keeping has risen steadily for at least forty years, despite the proliferation of gimmicks which are supposed to increase efficiency. The author recently toured a small city's facility, fully computerized and proud of it, which consists of a forty-bed hospital (rarely half full) and a ninety-bed nursing home. There are ten full-time employees in the business office and another seven or eight in medical records! In the days of quill pens, rag paper and *private payment*, nobody dreamt of needing a bookkeeper for every eight patients. The gadgetry, even when it works right, is less an advance than a smokescreen. Even in banking, the heavy dependence on computers is only partly due to the myriad daily calculations which have always been a legitimate part of the business. A program disc specific to the "Fair Lending Practices Act" is widely advertised in banking magazines, and is apparently a good seller. It is safe to assume that the people who first created bank computers, decades ago, did not envision having an entire program for dealing with just one branch of the federal bureaucracy.

On the other side of this counterfeit coin, a startling percentage of so-called free enterprise involves selling electronic gadgetry TO the government itself! Only a few years ago, around 1990, the "conservative" business publications like *Forbes* and *Fortune* were preaching eternal enmity toward big government in all its nasty forms. Now all they can talk about is computerizing government agencies to make them more "efficient", a dubious goal even if it happened to work. John Stuart Mill, who would now be called a libertarian and classed with the right wing, explained that since intrusive governments are inherently bad, *efficient* intrusive governments are something to be avoided all the more. But that doesn't matter to the neo-conservative business heroes; because it is the "computer age" public agencies simply must join the party, and if clever insiders can make a killing on electronic stocks so much the better. Among the non-regulatory agencies the worst offenders are the public schools, which, after decades

of spending more and more to deliver less and less, have decided they need another "revolution". Bureaucrats in general rarely show restraint with other people's money, even when buying the simplest items. Complicated electronic equipment, the vehicle of the *zeitgeist*, is positively sacred: it must not be slighted, regardless of what purpose it actually serves. The author's home town library recently joined the crowd by spending over \$100,000 on a computer system which was supposed to save on labor. Its staff doesn't seem any smaller but the latest financial report shows that another \$13,000 originally earmarked for new books has to be spent on "cataloguing materials". If they were talking about typewriter ribbons and file cards, \$13,000 would have lasted from the time the library was founded until well into the twenty-first century. All this would be bad enough if the computers were confined to the original purpose of looking up materials from various collections, but they haven't been. Among other things, the author was astonished to find people spending hours at these terminals, typing personal materials like school reports and résumés, and making a lot of noise in the process! We have yet to see a library where people are allowed to wander in off the street and use ordinary typewriters, while other people are trying to read, because typewriters are not icons of trendy millennial fantasies. Everybody knows what a typewriter does, and understands that libraries do not exist to lend office equipment. But on the brink of the twenty-first century, it is not easy to tell where tragedy leaves off and comedy begins. The local Chemical Dependency Center recently announced that among other exciting developments, it would soon be advertising on an electronic network called the "internet." Supposing this actually brings a parade of new customers, what could be more delightful than having drunkards and druggies from all over the nation take advantage of county funding?

Our own field has been relatively free of such nonsense, but there now seems to be a rash of people trying to change this. Ignoring the politically ambitious and the net-wits, one might observe the spread of an academic technique called computer modeling. Such methods may (or may not) have value when used by experienced laboratory scientists to narrow their range of choices. All too often they are seen as a substitute for hands-on research, a socially accepted version of the fraternity brat's "dry-lab." They had already been taken to extremes in 1961, when the Air Force spent a year running computer programs to discover the ideal monopropellant. Needless to say the size and cost of the equipment did not deter the government, at the peak of the "cold war" years. All that resulted were theoretical structures of things that would have detonated at the slightest provocation, if they could even have been made in the first place. According to the book *Ignition*:

The Air Force, appalled, cut the program off after a

year, belatedly realizing that they could have got (*sic*) the same structure from any experienced propellant man (me, for instance) during half an hour's conversation, and at a total cost of five dollars or so. (For drinks. I would have been afraid even to *draw* the structure without at least five Martinis under my belt.)

Now, with MicroBrains in plentiful supply, almost anybody can do dumb things with computers. A fellow member of our order told us of a recent article which showed why phenolphthalein should make a good substitute for charcoal in skyrockets. The obvious problem here is not danger but impracticably high cost, not to mention lack of charcoal tail. The author was intrigued enough to mix a batch of composition, 65/25/10, and it did act remarkably like traditional rocket powder when burned in a small heap. But the only rocket made, on standard tooling, behaved very oddly: it burst open and then quit burning entirely. Most of the propellant was still visible in the two largest pieces of the casing. The author has made plenty of good traditional rockets with the same saltpeter and sulphur, and the phenolphthalein was J.T. Baker reagent grade. The computer modeler did not report success rates because – this is the good part – *he never made a rocket*. It takes about thirty-five minutes starting with unmixed chemicals. Although it is a bitter pill for some to swallow, we really ought to purge our field of such laxity, before all common sense goes down the toilet.

Fortunately at least some elements of all fads die down; one is reminded of the automobile mania of forty years ago. At that time "horse and buggy thinking" was the magic phrase used to fight conservatism of all kinds – it did not have much to do with horses or buggies, but was likely to be hurled at those who opposed progressive education or the welfare state. We have all seen those 1950s predictions of the "car of 1990", which was generally long, low and very wide, with a turbine or jet engine. But where cities were once designed around the automobile, it is now becoming popular to copy European ideas and include pedestrian-only areas. Drive-in restaurants no longer have a glamorous image, drive-in theatres are growing scarce, and drive-in weddings never did catch on outside Las Vegas and southern California.

Another magic incantation, "high-tech", is already losing its shine. Originally this term was confined to complex electronic items, and a few exotic structural materials like graphite composites. Now everything from toothpaste to fishing reels has to be high-tech, making the concept all the more repellent to those who didn't like it in the first place. The author recently saw one of the television true-like crime shows, on the subject of the elusive high-temperature arsonist. The reporter said that his exact method was unknown, yet persisted in calling it "high-tech"! Perhaps this makes the A.T.F. agents feel better; they would certainly look stupid if they couldn't catch an

arsonist who was low-tech. They made ominous references to “materials used in the space shuttle boosters,” just so viewers would know how high-tech it had to be. Now most of us know what is used in the space shuttle, although we don’t employ much in our display shells because it is sissified and generally more trouble than it’s worth. When the use of an inorganic oxidizing salt to enhance a fire can be called “high-tech”, we can only wonder what the phrasemakers have in store for us next.

Federal agencies, armed with the highest “tech” available, consume obscene amounts of money and make the lives of decent people a regulatory nightmare – yet their record of catching violent offenders remains spotty. According to an August 1995 *Fortune* article on the Unabomber, “Freeman believes the task force can identify the bomber from information stored in its databases... ‘I think of it in months.’” But it did not happen; the Feds eventually gave in to Unie’s demands and published his “Manifesto”. The suspect was caught by the most timeworn of methods when someone close, his own brother, turned him in.

Much as we may admire Unie’s elusiveness, we can’t agree with all of his anti-industrial stance. Up to a point the products of industry really do improve our lives; the trouble is that most present-day Americans want to enjoy these luxuries without getting their hands dirty, so they become paper-pushers, or worse yet, button-pushers. The actual production of useful goods gets farmed out to foreign countries, which grow richer while we sink further into debt. Americans do need to be more frugal: if we must drive automobiles we might demand simple, high-quality ones with a design life of at least twenty years. Instead, the fashionable still buy new cars every few seasons, but they get half of them from overseas. The right way to deal with the evils and excesses of big business is simply to refuse to buy its products; if only we could stop the government from buying them as well we might really do some good.

While the media types fawned over Unie’s hand craftsmanship, he didn’t even make particularly good bombs for a Harvard man – of course he *was* graduated in the 1960s, after the rot had set in. If the reformers and revolutionizers keep it up they may eventually provoke people who can do the job right. So far, most of them haven’t been worth the powder.

The author’s highest expectation from the new society is simply to be left alone. He doesn’t want Hillary’s health plans, because most of his medications literally grow on trees, and he laughs at the Brady Bunch, because his fifteen-shot assault rifle is legally an antique. His modest stock of fine clarets should be prime in about ten years, and he knows where there is enough Paris green to last well into the twenty-first century. There is a small but viable

chance that we will again have a world where baby boomers are small report units, conspicuous consumption is advanced lung disease, floppy discs are seen mainly in bad backs, and “software” would be interpreted as lacy lingerie. On the other hand, we might end up with the streets full of rioters who can’t add up a grocery bill without electronic assistance. If that happens, we hope to go out shooting, perhaps in the company of a sassy redhead who will turn up her little nose and say, “Let them eat chips!”

— T. BABINGTON BRIMSTONE



THE MIS-ADVENTURES OF DR. DO-LATTLE

(Tune: “Talk to the Animals”)

If you can talk to the cyber-geeks – learn their languages –

As you study for your Ph.D.

Though there’s nought in your curricula
Pyrotechnic in particular,

O, ever so enlightened will you be!

I am a martyr to the cause of futurism,
Like so many in my academic clime,

My constant E-mail grew annoying,
Even threatened my employing,

And they punished me for wasting company
time.

So from Arizona to Ohio did I travel
Searching out a professorial sinecure;

Where on the tenure track I’m staying
Without a need for there belaying

My career as cyber-pyrotechny’s great poseur!

How I love my indisputable position
As the leader of the cyber-pyro gang –

Heed my strident safety warning,
Read my posts or you’ll be mourning

That you dared try making anything go “bang.”

Go to any trendy library or high school

And on the “Internet” you’ll be allowed to romp;

There, learn schemes of futuristics,
Plied with government statistics,

Everything but eighth-grade English comp!

If you can talk to the cyber-geeks – learn their
languages –

Once you have your God-almighty Ph.D.,

Though there’s nought in your curricula
Pyrotechnic in particular

They’ll blip and bleep

and slip and creep,
strange noises make,

and safety-fake,

and speak with awe and reverence of thee! ☞

— MERCURIO DOLCE

ADDENDUM TO "THE USE OF HIGH EXPLOSIVES IN FIREWORKS"

Readers of Ernst Pfantodt's article in the February, 1996 issue of *The Case Former* may be interested to know that W.A. Hanbury, the nineteenth-century pyrotechnic amateur and author of extensive manuscript notes on pyrotechnic practices of various contemporary manufacturers, left a description of a "guncotton rocket." At one point there is a short reference that says:

He [Pain] makes 1/2 lb. (are they 1/2 lb.?) rockets with heads like an Asteroid head - of the same calibre as the exterior of the case, and fills them with gun cotton, and he said they gave as good a report as the Coehorn maroon with 13 oz. of powder. N.B. - a detonating tube is necessary for firing the cotton.

The "detonating tube" mentioned in the last sentence is, in today's parlance, a blasting cap. The American reader should be aware that the "1/2 lb." rocket referred to in the text is according to the British system whereby a rocket of 7/8" inside diameter is "1/2 lb." rather than "2 lb." The "Coehorn maroon with 13 oz. of powder" would have been a 4-2/5" aerial maroon using black powder as an explosive charge - these notes were written in the 1880's, before flash powder had come into use for explosive effects.

A lengthier piece elsewhere in the manuscripts is mostly a fairly tedious description of the casing itself, with minute details including the weight of

the casing parts, but alas not the weight of the charge. Significantly, the piece says:

The charge is compressed guncotton bought ready made up into cartridges with detonating tube without which they do not explode. Craig said these were the only rockets they prime on the clay, to give a good flash for the detonating tube. He said they give as good a report as the 4-1/2 inch maroon with 13 oz. (?) of powder - if they do anything of the kind they would be cheaper, easier to make, and safer than the maroon.

Hanbury's comment indicates that the celebrated firm of Pain's Fireworks endorsed, by its practice more than a century ago, Pfantodt's contention that "a properly-selected high explosive will... detonate only from the proper use of a blasting cap, and will be much less sensitive to shock, friction, or flame than are flash powders or any other pyrotechnic compositions."

— SCOPPIETTO DULCAMARA

THE CHARLATAN'S CHANSON

(Tune: "Pat-a-cake baker's man")

Safety-fake, safety-fake, Confidence Man -
Betray fellow pyros as fast as you can.
You take 'em and shake 'em, and steal their Class
"C" -

Saying, "I'll leave nothing for you, and take all for
me!"

— GASSILASCA JAPE



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DO YOU MATH SKILLS ADD NEW MEANING TO THE TERM "LONG DIVISION"? ARE YOU ONE OF THOSE PEOPLE FOR WHO IT IS DIFFICULT TO PROPERLY USE ENGLISH?

Without these skills its hard to get a descent job or to simply cope with the shear volume of information in today's society. Pyros, join you're friends in other hobbies, when you go on the Internet don't look like an illiterate dolt. If you're elementary school let you down there is still hope, we have sold millions of our NerdPerfect programs to people just like you. Even more have been bought by local, state and federal agencies, making our firm one of the great success stories of the free enterprise system. Hardly anybody will be able to tell your work from that of a Harvard graduate! For more exiting details, please contact:

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NEWS FROM THE *Grapevine*

The editorial staff of The Case-Former is pleased to introduce a new informative column to keep its readership informed of significant events and personalities in the pyrotechnic world. To paraphrase Sgt. Friday, only the names have been changed to protect (just barely) the not-so-innocent. Any resemblance between the characters here portrayed and real life is intentional. We join our author in mid-stream of consciousness...

Farewell to our past P.G.I. President Blombo, who thought presiding over the P.G.I. was going to be as easy as blowing up squirrels. He misunderstood the qualifications – P.G.I. does not stand for Pudgy-Grown Ignoramus.

Flack and Dottie Screwes are at it again, screwing not each other, but foolish subscribers of A.F.N. (Ain't F*%¢@n' News) with their not so new screw... Fireworks Video Magazine, which has been on the market for a few months now. How it's lasted as long as it has is beyond me. I previewed Vol. 10, and it is the most ridiculous piece of pyrotechnic information I have witnessed since the debate that took place involving that fat, bloated, k-rap juggling, beanie-wearing, fart-knocking, Krookshankee, during last year's P.G.I. convention. He was as pathetic as the hair growing out of his ears – the roots are conflicting with what's left of his brains. Speaking of witnesses, I witnessed Bonnie Krookshankee checking into a fat farm during my trip to the Winter Blast, last February. As of this writing I am pleased to announce she has lost 40 pounds... from her belly to her ass! No more discombobulated Chef Boyardee ravioli juice for her.

Back to F.V.N... who in his right mind wants to pay \$30.00 for a 106-minute video consisting of: 1) Charlatan Wheeze spewing a fountain of misinformation that pertains to absolutely nothing. Here is an example of a lib who just likes to hear himself talk. I could only watch it for a few minutes with my back to the T.V. Every time I see his face I feel like turning into the Hulk. He's wearing a Pyrock shirt no less! Here's a guy who would do anything for money. For example... he didn't know what to do with that tall doofy kid of his for the summer. Camp costs money. Charlatan can't spend money – he only steals it. So what does he do with Lurch? He rented him to the zoo to feed the giraffes. Then came the wife! It seems the zoo was low on baboons with hair weaves so he threw in the wife and brother-in-law as a matched pair for a few extra bucks. Now with all this free time left over, he sits in front of a video camera (anyone missing a camcorder from '91?) and rattles of several minutes non-

sense. \$30.00(!!!) annually for this? As an added bonus... the Screwes, Flack and Dottie, sit dumb-founded sharing news taking up time by showing you pictures of calendars and cartoons from newspapers which you can't really make out due to the small graphics. Flack... if you really want to earn some money, try to get your wife to model Halloween masks. Back to the Wheeze: now, I'm a Catholic and was always taught that God does things for a reason... for the life of me, I can't figure out why He gave this rat a larynx!

Three cheers for the N.F.A. and their pursuit of a lawsuit challenging the C.P.S.C. (C**ks*****g Pieces of S**t). I.O.O.J. is behind you 100% A.T.F. (Accusation, Treachery, Fabrication) and D.O.T. (Dicks Out There) are next, we hope!

Here's Mr. Screwes again, showing us what it's like to dissect Class "C" fireworks. This is something I started doing when I learned how to walk. That's another 15 minutes shot to Hell. Between the two main contributors to A.F.N. and F.V.N., namely Charlatan Wheeze, a man lower than flea s**t, and Kon Krookshankee, who has not only the appearance but the manner (egad! fap!) of Major Hoople, I can't see anyone wasting another cent on any of these publications. To see a grown man looking like an anorexic Santa Claus dissecting Silvery Swallows with a pen knife and surgical gloves like Dr. I.B. Gross is not my idea of an informative publication. I was more fascinated by the part in his wife's hair. Shows you just what could happen when you approach a bloated baby elephant and pull his tail with your head turned. Now there's a demo I would pay to see!

Orca the Killer Whale: remember him and his "stupor front" in N.Y.? I'm still trying to figure out what he was fronting for. Well, after charming everyone with his incredible humor and dialogue when presenting his "front" which looked better than his back, our buddy Orca was arrested for shoplifting at a local supermarket in upstate New York. The charges were dropped when police removed his shirt. It seems the store manager assumed he was smuggling a small turkey out of the store under his shirt behind his right shoulder. It turns out not only did the store manager have a hunch – so did Orca! Now, after being examined by the authorities he was released in his own custody. In parting it was suggested that he grow another one on his left side and become a professional caddy... This just in... U.F.O. III was recently spotted at a Southern California airport. His head was shaved completely and he was wearing a white shower curtain banging a tambourine and selling flowers while chanting "Honashee! Honashee!" Good luck Fuzzy!

B.B., head of safety, was being sought for questioning regarding a recent appearance at the P.G.I. banquet. It seems that MCA Records is accusing him of impersonating rock star Tom Petty. When representatives of MCA came to question him at his

ranch, they found themselves facing three huge Great Danes the size of Clydesdales and an uncovered minefield of dog s**t. They decided it was a matter best left alone.

The Viking Prince himself came up small in the election for 2nd V.P. Not discouraged, he is currently teaching himself how to walk on fire like the Moroccans do. His last attempt in Michigan was successful to some extent. The partner he ushered out with him came out of it with melted sneakers. The Prince is convinced it's mind over matter. What his comrade with goocy rubber soles didn't comprehend was that this works when the "matter" does not consist of 80-proof goo-goo juice.

For sale: One "Brother Fredo" roommate kit. Consists of 1 oxygen mask with tank; 1 case of Glade room freshener; 4 clothespins; 1 week of Allstate health insurance; 7 corks; 5 parakeets with cage; 1 pair of goggles; 1 gas mask; wallpaper paste and grout; and 1 asbestos exhaust hose with girdle. For more info call: Frankie Spanky, c/o Mt. Sinai Hospital, Recovery Room 1803. Phone 1-800-HE-STUNK.

I've been told that Mr. Wheeze met his wife while working with the Peace Corps. Back in '82, the two of them met when he was visiting a gorilla farm in southeastern Brazil. She was the head banana shucker. She had spent 19 years on the farm and developed an uncanny resemblance to the young charges she wet-nursed. Mr. Wheeze took a liking to her due to the similarities of his childhood.

Kon Krookshankee goes muff diving! On the morning of July 19th, 1996, I was seated in the host hotel restaurant in Weedsport. As I sat staring at the low-grade dog food I was served, I noticed two large shadows sweeping across my table. It was the Krook and an unidentified person. The unknown barrel model asked the Krook if he was interested in joining him for breakfast. The Krook replied, "No, I just had a little something." When asked exactly what it was that satisfied his incredible appetite, the Krook responded proudly, "Wilted cheese and parsley!"

I.O.O.J. welcomes two new members this year. There would have been three but Sleeping Beauty was not to be disturbed. Joe McDonald and Frankie Cuch were the only two candidates at this year's convention. The induction was completed with granola bars, as powdered sugar doughnuts were unavailable at the time.

That's all for now... till next time... ☘

—MIGALUCC

NITROGENIUS

Gene was a weird but great guy. I only knew him from the seventh to eleventh grades, but he helped make them exciting times. The son of a blacksmith and blaster, Gene had access to strong

acids, and alkalis, unusual metals, caps, and the explosives the rest of us so desperately craved. Gene's knowledge of what could be done with acetylene was legendary. But it was his work with high-order explosives that endeared him to us budding pyros, explosive wannabes, and sick-minded, devious vandals.

We had already done a lot of good, solid work with commercial fireworks, commonly-available chemicals, and various sporting powders. Our flagship devices were five-shot repeating bombs nailed to boards and equipped with nitrated-cotton time fuses. When batteries of these artifices were directed toward the door of the police station, they made for exciting nights filled with reports, smoke, sirens and people running through alleys and backyards. When we blew out the glass windows in parking meters with cherry bombs, the results usually included comical, Keystone-cop gatherings during daylight investigations and inquiries, and an occasional bonus article in the newspaper. When, on hot summer nights, we placed strong paper tubes with charges of black powder behind a quarter-pound of graphited grease on the sills of open bedroom windows, the splattering across the bed and against the far wall made for some hilarious window-peeping, especially after the smoke cleared.

Gene did not help us with these worthwhile activities. Fortunately, he worked in an equally productive area as far as our terroristic endeavors were concerned. He nitrated everything except dynamite and also had access to that wonderful stuff.

Was Gene a genius? I believe so, because who else could successfully produce primary explosives in the seventh grade? Knowledgeable explosives chemists will probably know exactly what Gene made. He told me once, but I cannot remember. I think it was "tetra" something. Whatever, he had this vicious compound in the form of tiny pieces of paper that he kept moist in a small vial. When dry, these would explode with the slightest contact with any oily compound. Gene recognized that such conditions could quickly be achieved by the drying action of clothing combined with the force of somebody's rump as it pressed into the walnut-oil-soaked seat of a school desk. Gene's intuitiveness was rewarded early one afternoon in Mr. Anderson's biology class. Three clearly audible "snaps" and three little clouds of smoke totally disrupted the class and made one little girl wail about the tiny hole in her dress.

One day we were crow hunting and a farm dog chased our car for a half mile, ruining our chances to set up on a nice group of birds in the nearby woods. That did it for Gene. The next weekend he took care of that problem with one of his infamous "hot dog surprises." These were sticks of 40% ditching with bacon tightly wrapped around them with soft machinists' wire. A big advantage of this method for the dog's owner was the shal-

low, ready-made grave that often formed in the road ditch near what remained of the carcass. Fearless, Gene once took a cat off the porch of one farmhouse with his .30-40 Krag.

Gene could make a dull winter day come alive. One time around Christmas we were driving on a frozen lake, making donuts on the ice and seeing how many times we could make the car spin. We were heading toward a group of about 15 fish houses when the idea hit Gene. "Go slow across that opening between the houses." said Gene as he capped and fused a stick. "No need to gun it." We drove off the lake to watch the explosion from nearly a mile away.

The nearest house was nearly 100 feet away from ground zero, but all houses were similarly affected. Steam and fishermen soaked with water, coffee, and alcoholic beverages erupted almost simultaneously from the houses. We suspected that the abruptly-rising water columns extinguished only a few of the fires in the stoves, because the occupants of the houses quickly went back inside to escape the 20-below-zero cold. Others ran shivering to start their cars and trucks. We often marveled at the resiliency of thick ice, and how the shock wave could push water with such pressure up through the fishermen's cork-sucking iceholes. Credit Gene with one of his finest stunts ever!

But all this fun would soon end, as graduation was near and interest in females, college, jobs, and the military began taking its toll. I can only pray that our youth will continue to have the opportunity to spring harmless pranks and lightly vandalize society by learning to be creative with low- and high-order explosives and commonly-available chemicals. Only then can they claim to be members of a free citizenry. ¶

— HORST KNALLKÖRPER

WHAT IS A "FIREWORKS EXPERT"? — AN HISTORICAL VIEW

Cedat fortuna peritis.

—MOTTO OF THE U.S. FIELD ARTILLERY

*C'est par Amour que les arts se parfont
Que les vaillans et les sçauans se font.*

—J.-A. DE BAÏF

Over the past few years our small and close-knit field of pyrotechny has been riven by debate over the issue of "expert witnesses" in lawsuits involving fireworks businesses, notably in petition drives to expel members from the American Pyrotechnics Association in 1993, and in 1994-5 from the Pyrotechnics Guild International. The merits of the specific cases in which the members in question

were involved have been vigorously argued, as have the benefits, faults, and ethical dilemmas arising in general from the hiring of "expert witnesses" by parties to litigation. It is not our purpose to touch on these here. Rather, we think it may be of interest to ask just what is a "fireworks expert," whether as a witness or otherwise; what makes someone an expert of this kind, and how may we identify him as such?

The "expert credentials" offered by one the persons involved in these recent controversies consist of a Ph.D. in a field called "nuclear chemistry" – whatever that is, it is remote from pyrotechnic chemistry – and a history of unsuccessful dabbling in several lines of fireworks business. The other individual's academic credentials are even slighter, and his experience has been as a part-time display operator and salesman of second-hand plastic mortars. We have long been suspicious of academic credentials in chemistry as a background for fireworks, because several persons well-educated in chemistry have uniformly told us their academic experience included little or nothing that acquainted them with pyrotechnic phenomena. Nonetheless, one friend of ours, who was not present at the 1994 or 1995 P.G.I. conventions, and who is not an A.P.A. member, was quick to attribute the actions of those bodies to "anti-intellectual" attitudes. We were reminded by this of how the news reader Peter Jennings (a Canadian) chided the American people, on election night in 1994, for having a "temper tantrum" in electing Republican majorities in Congress, when clearly Mr. Jennings felt we were rejecting, in the Democrats, what was "best for us," as an infant rejects bitter medicine.

Clearly, the problem is deeper than these superficial explanations. The possession of academic credentials alone is no guarantee of deep learning or expertise. Granted, a Ph.D. in chemistry, or any other discipline, is a measure of *some* accomplishment – even if from an undistinguished land-grant college. But that accomplishment may be mere *sitzfleisch*, with which, if the subject in reference has always possessed the same well-upholstered physiognomy he now has, he is evidently abundantly endowed. Rejections of claims to expertise by such a person, in a specialized and recondite field like pyrotechny, may be well-founded. Any reasonably independent and observant person knows that the American university has been a sink of intellectual dishonesty, time-serving, plagiarism, and political correctness for decades.

To be sure, these have been greater problems in the liberal arts and social sciences (what a brilliant mathematician of our acquaintance once called "bullshit disciplines"), but they have begun to affect the more rigorous scientific fields as well. Thus we have, for example, a study attributing I.Q. deficits in children to high levels of lead in the blood – setting off public hysteria about the use of lead in gaso-

line, paint, and other common products – when in fact the children with high lead levels were mainly poor urban blacks, whilst those with low lead levels were middle-class suburban whites, and the study ignored the numerous social and economic factors that might equally well have accounted for I.Q. differences! More ominously, there is the case of the prominent Harvard scientist who strenuously maintained, right up to the fall of Soviet communism, that the infamous “yellow rain” dropped on Afghan villages by invading Soviet forces was nothing more than bee feces.

Less flagrantly than these politicized examples, but even more significantly, the tremendous prestige in the concept of “science” conceals the banality and mediocrity of so much passing by that name. Thus, observations on shell drift, or printing corrugated boxes, or sanitary sewage disposal, are dressed up in the trappings of scientific formality, as if on a par with, say, Leonhard Euler on celestial mechanics. It is much the same as how people in servile or insignificant positions are often dressed in clothes that resemble those their social betters wore 50 or 100 years previously. The fancy restaurant still puts its waiters in tailcoats even though none of its customers have dressed for dinner in this fashion for decades. No perceptive person would be confused about the standing of a waiter by his archaic upper-class dress. Similarly, we should recognize that anyone who writes that a “convection” (*sic*) is something that takes place in court, even if he has a Ph.D. in nuclear chemistry, is wearing the academic equivalent of a tux that is out at the elbows and shiny in the seat.

Pyrotechny is, in any event, not a science, but a skilled craft. In the hands of an exceptional workman, it may attain the status of an art form. The chemistry involved, to the extent it is, is an applied chemistry – in the Comte de Chaptal’s felicitous phrase, “la chimie appliqué aux arts.” Vast and important areas of chemical knowledge are either mostly irrelevant (e.g. organic chemistry) or only remotely applicable and not essential to a practical command of pyrotechny (e.g. physical chemistry). Michelangelo did not need to know the molecular structure of his pigments in order to paint the Sistine ceiling; nor would all the knowledge of a paint chemist have enabled him to paint it. So it is with the pyrotechnist, who has as his canvas the “starry-deck’d canopy of heaven.”

When seeking benchmarks of pyrotechnic expertise, it is illuminating to examine the backgrounds of various authors of pyrotechnic books over the ages. We have prepared a table of some notable pyrotechnic authors and their backgrounds to see what, if any, common factors might emerge that portray their characteristics.

Military rank is the most common feature, with a surprising 15 out of 34 – and note that authors of books devoted solely to military pyrotechny have

been excluded! If military affiliation (but not actual military rank) is counted, four more (Cutbush, Faber, Davis, and Ellern) are included, making 19, or 56%. Holders of doctoral degrees numbered only seven, or 21% – of whom five (Meyer, Davis, Izzo, Ellern, and Shimizu) also had military rank or affiliation.

Ron Lancaster has somewhere remarked that some people seem to regard the interest of a clergyman in fireworks as odd, but he is, in this survey, one of three such pyrotechnic authors (and the other two are distinguished antecedents). As a schoolmaster he also has a noteworthy predecessor in Thomas Kentish.

Practising pyrotechnists (defined for these purposes as persons making significant portions of their livings from the manufacture of fireworks) are not abundant on the list, numbering only seven; if persons connected with the trade, e.g. Browne (a consultant chemist) and Lamarre (a chemical dealer) are added, nine. This is not particularly surprising since persons making their livings at fireworks have little reason to disclose the mysteries of their art.

The connection of military service with pyrotechnics is more understandable amongst the earlier writers, in whose day there was less difference between military and civilian fireworks, and when artillerymen in the service of the state were called upon to provide displays for public rejoicing after the wars had been won. Still, it is significant that many of their books are devoted *solely* to fireworks for pleasure. Special note should be made of Chertier and Shimizu – in many respects authors of similar importance and character – whose interest in pyrotechny for pleasure followed long after military service. Another pair of authors due some attention are Josef von Uchatius, an Austrian general whose other inventions included an early moving-picture machine, and Amédée Denisse, inventor of the first rocket-borne camera. They both seem to have possessed that polymathic inventiveness so typical of the century that produced Edison.

Allowing for the overlap between categories, what do our examinations of these pyrotechnic experts’ backgrounds tell us, if anything? We think that the picture is too nebulous to show much, other than that possession of an academic degree is *not* a good predictor of expertise as a pyrotechnist!

What, then, is the defining character of the fireworks expert – that *rara avis*, before whom fortune always yields? Our conclusion is simple and probably unscientific, but founded on a lifetime of experience. One of our favorite contemporary philosophers, Jeff Cooper, once wrote that no one ever excels at an activity he does not love. There may be those who endure, in activities they do not enjoy, and attain some competence or skill; but they will never match those who are motivated by devotion, rather than by mere material gain or desire for recognition. Marsilio Ficino, in the midst

of that great burst of artistic creativity we know as the Italian renaissance, wrote that "Love is the Teacher and Ruler of the Arts." Similarly, the Abbé Hugonin, in his commentaries on Hugh of St. Victor, said that "Intelligence marches towards the conquest of truth, and love reposes in its enjoyment; it is the triumph after combat, peace after war. Intelligence commences the work, but love crowns it."

Pyrotechny, and, we suspect, no comparable art, ever rewards its votaries with wealth commensurate to their efforts. There have, indeed, been those who have done well financially, but one suspects these people would have done as well or better in another field, had they pursued it with equal ardor. Accomplishing the work well is, for them, the principal gratification; prosperity and reputation may follow, but only as by-products.

And it is in this simple enjoyment of one's own ability that we may know the master of his craft to be such – that facile performance of the diffi-

cult, with that *sprezzatura* or nonchalance that conceals all art, and makes whatever is done appear to be without effort or thought, as easy as rolling off a log. It is this we see in the performance of an Isaac Stern in the concert hall, or of a Jack Nicklaus on the golf course, or in any small village in Malta on the patronal feast. Indeed, to detect such expertise calls for some discernment on the part of the observer, because the real master feels no need to proclaim himself as such or to brandish credentials. His work speaks for itself.

On the other hand, we have often wondered whether many of the self-proclaimed experts we see even *like* pyrotechny, much less have the love for it needed to be real craftsmen. What they proceed from is vainglory, that is, love of themselves and love of money. Sad as it is for the people they hurt, it is sadder still for themselves – for what, in the end, will they have to look back upon but wasted lives spent "striving after wind"? ¶

— ERNST PFANTODT

SOME NOTABLE PYROTECHNIC AUTHORS AND THEIR BACKGROUNDS

Author	Book Title	Date Published	Author's Background
Roger Bacon	<i>Opus majus; Opus tertium; Epistola de secretis operibus artis et naturæ, et de nullitate magiæ</i> (description of gunpowder)	Mid-13th century	Franciscan friar; Oxford don
Albert von Bollstadt (St. Albertus Magnus)	<i>De mirabilibus mundi</i> (gunpowder and fireworks recipes)	Third quarter 13th century	Bishop of Ratisbon; canonized 1930. Mentor of St. Thomas Aquinas.
Vannoccio Biringuccio	<i>De la pirotechnia</i>	1540	Artillerist to the City of Siena and to the Holy See
Joseph Furttendach	<i>Halinitro-Pyrobolia</i>	1627	Artillerist to various German princes
François de Malthe	<i>Traité des feux artificielz</i>	1629	Artillerist (France)
Jean Appier (Hanzelet Lorrain)	<i>La pyrotechnie</i>	1630	Printer and engraver
John Bate	<i>The Mysteries of Nature and Art</i>	1634	Gunner
John Babington	<i>Pyrotechnia</i>	1635	Gunner
Casimir Simienowicz	<i>Ars magnæ artilleriæ</i>	1650	Lieutenant-General of Ordnance to the King of Poland
A.-F. de Frézier	<i>Traité des feux d'artifice</i>	1706	Military engineer
J.-C. Perrinet-d'Orval	<i>Essay sur les feux d'artifice</i>	1745	Military engineer
Robert Jones	<i>Artificial Fireworks</i>	1765	Lieutenant (later Captain), R.A.
C.-F. Ruggieri	<i>Elémens de pyrotechnie</i>	1801	Practising pyrotechnist
L.-E. Audot	<i>L'art de faire à peu de frais les feux d'artifice</i>	1818	Publisher and bookseller

SOME NOTABLE PYROTECHNIC AUTHORS AND THEIR BACKGROUNDS CONT.

Author	Book Title	Date Published	Author's Background
James Cutbush	<i>A System of Pyrotechny</i>	1825	Professor, U.S. Military Academy, West Point
Moritz Meyer	<i>Lehrbuch der pyrotechnik</i>	1840	Captain, Prussian army; held doctoral degree
F.-M. Chertier	<i>Nouvelles recherches sur les feux d'artifice</i>	1843	French artillery officer
Martin Websky	<i>Lustfeuerwerkkunst</i>	1846	Professor; doctor
Josef von Uchatius	<i>Die Kunst-Feuerwerkerei zu Lande</i>	1848	Austrian general; inventor of electrical firing
A.-D. Vergnaud	<i>Nouveau manuel complet de l'artificier</i>	1865	General, French army
Thomas Kentish	<i>The Pyrotechnist's Treasury</i>	1878	Schoolmaster
A. Lamarre	<i>Nouveau manuel de l'artificier</i>	1878	Chemical dealer to the fireworks trade
W.H. Browne	<i>The Art of Pyrotechny</i>	1880	Chemist; consultant to the fireworks trade; held doctoral degree
Amédée Denisse	<i>Traite pratique complet des feux d'artifice</i>	1882	Commercial artist; photographer (made first photograph from rocket-mounted camera)
Paul Tessier	<i>Chimie pyrotechnique</i>	1883	Chemist
Donenico Antoni	<i>Trattato teorico-pratico di pirotecna civile</i>	1893	Practising pyrotechnist
Henry B. Faber	<i>Military Pyrotechnics</i>	1919	Dean, Pyrotechnic schools, U.S. Army Ordnance; patentee of civilian pyrotechnic items
Tenney L. Davis	<i>The Chemistry of Powder and Explosives</i>	1941	Professor of Chemistry, Massachusetts Institute of Technology; technical director, National Fireworks Co.
George W. Weingart	<i>Pyrotechnics</i>	1947	Practising pyrotechnist; businessman
Alan St. Hill Brock	<i>A History of Fireworks</i>	1949	Practising pyrotechnist
Attilio Izzo	<i>Pirotecna e fuochi artificiali</i>	1950	Colonel, Italian army; held doctoral degree
Herbert Ellern	<i>Military and Civilian Pyrotechnics</i>	1967	Pyrotechnic chemist, Diamond Match Co.; held doctoral degree
Ronald Lancaster	<i>Fireworks Principles and Practice</i>	1972	Anglican priest; school headmaster; practising pyrotechnist
Takeo Shimizu	<i>Fireworks: The Art, Science and Technique</i>	1981	Colonel, Japanese army ordnance; later earned doctoral degree; practising pyrotechnist

NOTE: No attempt has been made to list every work by each author, nor every publication date of works that may have been published in multiple editions. The date listed, in most cases, is that of the first publication or of the most common edition of the author's best-known work.



Lyra Pyroburlesca

*Big bombs, small bombs, great guns and little ones!
Put him in a pillory!
Rack him with artillery!*

— W.S. GILBERT, *The Grand Duke*

MY FRIEND THE DOCTOR

(From *The Mis-Adventures of Dr. Do-little*)

*A tune without a key, in the tonus peregrinus, to be sung
by a chorus of adoring, wide-eyed little children.*

I.

My friend the Doctor says, for kids to learn of
fireworks

They ought to buy the newest pyro book,
And try the "internet" of course, because with any
older source,
There is an awful danger that they might get took.

My friend the Doctor says, amateurs need licenses,
Tourbillions need their twisted wings to fly;
Kurt Saxon's work he really wrecked, he's quite
politically correct,
Except for shooting plastic litter... into the sky.

REFRAIN: Ma - a - aybe what the Doctor tells me
Isn't altogether true,
But he's a grownup and an expert -
People like him are the reason my school
bought... computers too!

II.

My friend the doctor says that copper in a
chlorate mix
Will cause a fearsome blast within the hour;
His other scary tales enthrall, statistics there are
none at all;
Obviously he needs some more... computing power.

My friend the doctor states that nasty merc'ry
sublimates
Really gave the old-time workers hell -
He thinks he has the inside scoop, but really he's
so full of poop,
Maybe he needs a dose of good old... calomel.

III.

My friend the doctor thinks that trendy new
computer links
Are necessary academic tools;
Brilliant chemists of this kind are bound to shape
my little mind,
And probably help some politicians... make new
rules.

So many fools are keen to help reform the
firework scene

That only one thing seems a certainteeeee:
The world would be a better place if they stayed
lost in cyberspace

With my friend - the Doctor - and me!

— S. DULCAMARA



PROFESSOR "K"

(To the tune: "Yesterday")

Professor "K"
a witless expert that will lie for pay;
he wouldn't know if it was night or day -
Oh I detest professor "K".

Cold in hell
would be the day that he could build a shell;
but how to do it he will gladly tell -
Oh, are those elephants I smell?

How, he, goes through life like a rat, I'll never know
One, can, only hope for the plague in Col-o-rad-
do-o-o-o.

The expert,
clad in tennis shoes and bowling shirts,
makes me want to take a nap in dirt -
Oh, rid me of this pompous twerp.

J-O-P
what a giant waste of ink and tree
useless studies of no use to me
can you spell relevancy?

What became,
of the krap for which you're famed;
those shells were guaranteed to maim -
You really ought to be ashamed.

"K", has, failed so much, it's become his stock in
trade

Now, he's figured out that his lies can get him paid-
aid-aid-aid.

Doctor "K"
would you like to go the Big Bruce way?
Put on the feed bag and go on display -
just get the hell out of the way!

— SAUL MCCARTNEY

A BALLADE OF THE PML

The Net py-ro-tech-ny does not com-ple-ment; The leaders it e-le-vates in-

com-pe-tent. From a bank-ruptured *Hymen* to *Boo-dab* it fell; and thence

to *Crank Meas-ley*, sad-history doth tell; there, cow-college chem profs their

theories explain with such lack of ex-per-ience, 'twill drive you in-sane.

A BALLADE OF THE PML

(Air: "If love's a sweet passion," *The Beggar's Opera*)

The Net pyrotechny
Does not complement;
The leaders it ele-
Vates, incompetent.

From a bank-ruptured
Hymen, to *Boodab* it fell;
And thence to *Crank Measley*,
Sad history doth tell.

There, cow-college chem profs
Their theories explain,
With such lack of experience,
'Twill drive you insane.

"No chlorate of potash
Paris green, or red lead -
Touch even one grain, and
You'll surely drop dead."

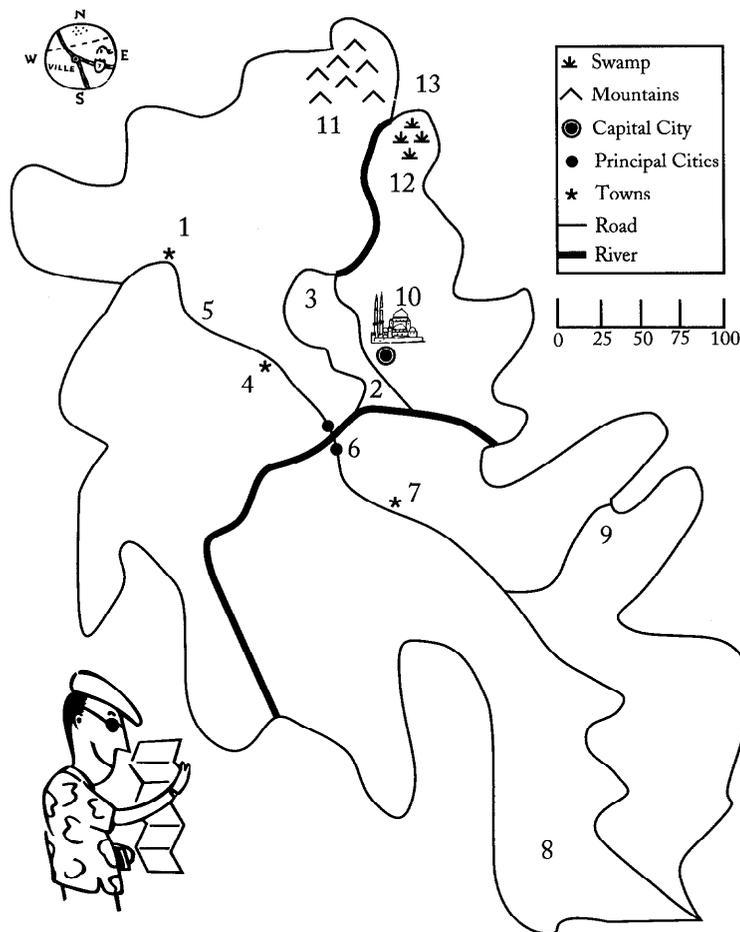
Any actual Bombs, you'll
Wait ages in vain
To see from *Crank Measley*,
Tom Dimwit, *Murrain*.

The bombs of *Fugisti*
Stir the Soul, lift the Heart;
But the Rant of a Net-Wit
Isn't worth a squelch'd Fart!

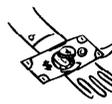
The People's Republic of Wheezanistan

POINTS OF INTEREST

1. *Rauchmantl* — site of the celebrated University, with its noted departments of Safety-Fakery, Prevarication, and Embezzlement. The Law School is well-known for its specialization in Barratry and Champerty. College architecture is of the Schlamperei-Dreck period.
2. *Bermuda Trialangle* — Shifting currents make this a spot to avoid at all costs.
3. *Lake Jiggery* — The fishing's great at Quisling Quay.
4. *Informant Information Bureau* — a must stop along the
5. *Benedict Arnold Memorial Highway* — with scenic Pander Pass, Moot Point, and Truth Bend.
6. *Jiggery-Pokery* — The Twin Cities of the Republic. Population three. Relish the exquisitely bland cuisine at the Farts and Sausages Diner (infrequently open).
7. *R.A.P. Shell gas station* — Fill your tank here — the stuff doesn't burn well, but it will probably get you out of the Republic, which is a must.
8. *Charlatan Badlands* — A stark, barren wasteland, buffeted by incessant wind, it makes the moon look like Yellowstone. Admission W400.00 + 15% tax. #110 B&W film sold for W200.00/roll + tax.*
9. *Wheezanistan National Forest* — A few sickly saplings of unknown species that produce a peculiar whine as the wind blows through them. Many of the original trees were burned down in a KRAP shell accident and have been supplemented by tasteful imitations made possible by modern injection moulding technology. A fascinating biological study. Admission W400.00 + 15% tax. #110 B&W film sold for W200.00/roll + tax.*
10. *Double Crosse* — Capital of Wheezanistan, situated on picturesque Desperate Straits. Site of "Thunderfarce '9?". Tourist attractions include many low taverns.
11. *The Heights of Arrogance* — Almost impassable due to incessant winds (cf. #9 above) and the always-un-sound footing. These desolate outcroppings sit atop a soft and always shifting bedrock, marked by numerous sinkholes and fault lines. It is separated by the River of Other People's Tears from
12. *The Slough of DeCeit* — a morass from which thick miasmata constantly issue. Flora and fauna unique to this area include the Flagrant Insolentia (national flower of Wheezanistan); several species of snake, all poisonous, most notably the Back-Biting Puff Adder; birds including the Yellow-Striped Sycophant, the Cheeky Bustard and the Bloated Shitepoke; numerous leeches, toads, stoats, and bloodsucking insects.



13. *Rising Gorge* — Scenic exit by water from the Republic. Ferry service to Anticyra daily, across the Bight of Taxes, via Acheron Packetboat Co. Steamer, *PMS Mal-de-mer*.



* NOTE: The currency of this country, the *wheelzel*, is highly inflated. Divided nominally into 100 *cheets* of 4 brass fart(h)ings apiece, the official rate is W1 = U.S. \$4.80 (black market W1 = 1/10¢ U.S.). Subsidiary coinage has not been minted in many years, as the only brass in the country is that possessed by the Head Charlatan.

International service to the Double Crosse airport is provided by Fly-by-Night Airways; the capital's principal accommodation, the Hotel Sordide, is rated "five emesis pans" by Michelin. Free bottle of paregoric on check-in. To arrange a trip today call



WHEEZANISTAN INTOURIST
1-800-GET-TOOK
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