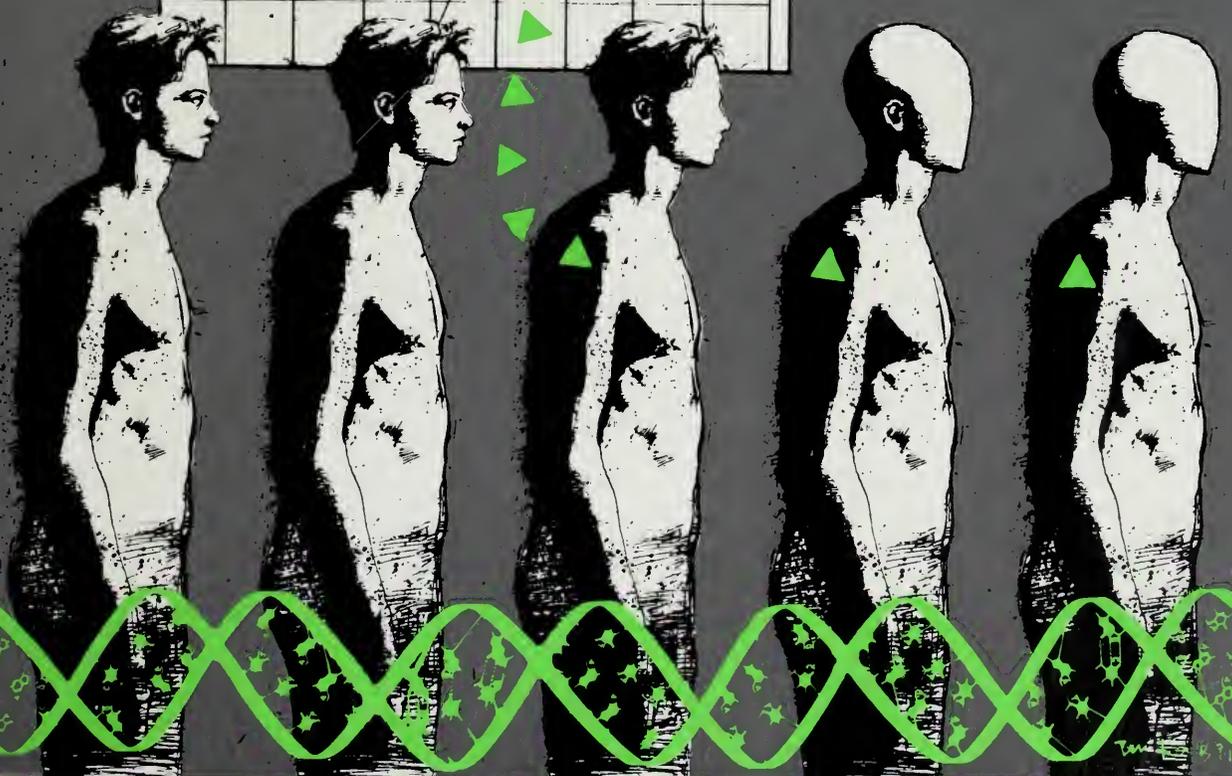
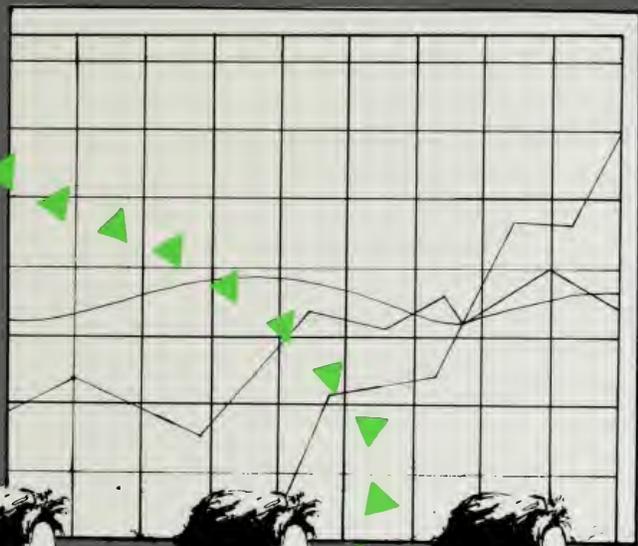
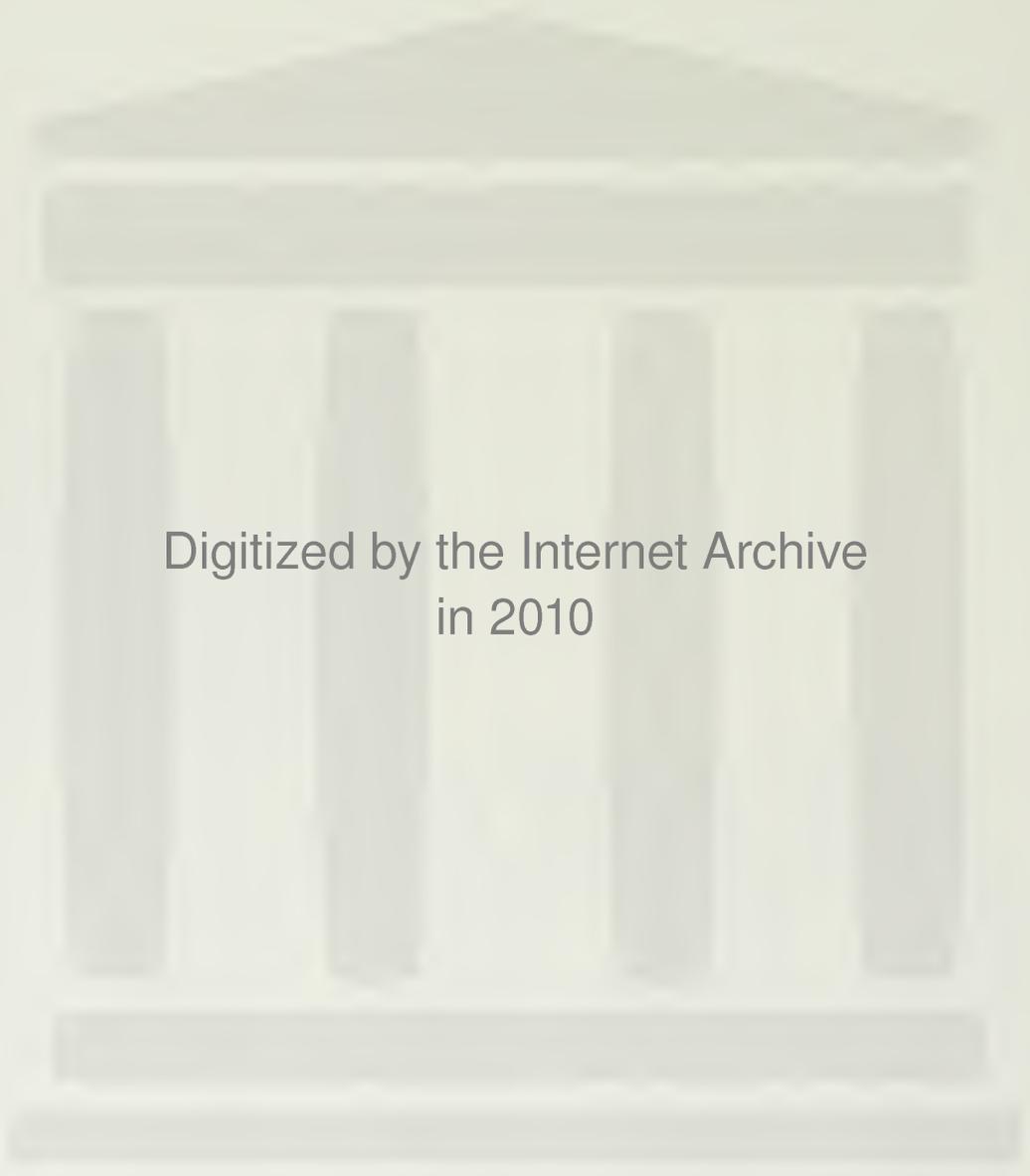


PROCESSED WORLD 28





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SPLICING HEADS

“New Technology” Again

Welcome to PROCESSED WORLD 28, whose theme is biotechnology, a very broad category that includes making both beer and transgenic species. The present direction of biotechnology's development is another bracing slap in the face for all of us who demand popular control over technology, science, and work itself. Those of us working on the magazine are not biologists. Our attempt to analyze biotech, then, represents something of the social process we think the majority of the population needs to engage in.

As we grope for ways to understand what is happening in this new realm, we face the disadvantage of being non-experts challenging experts, posing problems for our credibility right from the start. Teaching ourselves about arcane technological developments challenges the authority vested in scientific expertise. This challenge intensifies when we reject attempts by scientists and their boosters to force the arguments onto technical grounds.

A case in point—from an editorial in the May 1991 issue of *Biotechnology* magazine:

“If I were opposed in principle to the deliberate release of genetically modified organisms (GMOs) into the environment (which I am not), I would build my case not on hazards supposedly inherent in the recombination of diverse fragments of DNA, nor on the artificiality of gene splicing, nor on the presumptuousness of humans “playing God,” nor on the added impetus biotechnology allegedly gives to the growing polarization of the planet into the rich North and the impoverished South, nor even on the question of whether we really need better bio-control agents or novel plants with built-in herbicide resistance. I would focus instead on one simple question: is our knowledge of natural gene transmission sufficiently comprehensive to adopt as the baseline against which to assess the consequences, perhaps distant in space and time, of today's release of GMOs? . . . In less than two years we have learned that bacterial viruses are vastly commoner in water than was previously imagined, and that they probably have extensive interactions with

aquatic bacteria. Clearly, this new knowledge extends our vision of the machinery available for the horizontal movement of genes in nature. And that, in turn, alters our perspective on the possible onward journeys of stretches of DNA ferried into GMOs and then disseminated into the environment.”
“Commentary: Revelations Recurring” by Bernard Dixon

Dixon, an unabashed cheerleader for biotech, admits our knowledge of the consequences of releasing genetically modified organisms into the environment is woefully inadequate. His glib dismissal of an impressive list of social criticisms is typical. By rejecting social or ethical or economic considerations, by willfully ignoring the social consequences of their endeavors, the “experts” compel us to rise to the occasion with affirmations of our right to subject science and technology to more serious social criticism.

Biotechnology encompasses two powerful efforts to develop vastly profitable, marketable commodities. The first, engineering the human body, comprises everything from genetic screening/therapy and the Human Genome Project (HGP) to the insatiable and probably infinite market for new ways to “improve” human bodies/longevity/pleasures/health. This market will likely balloon as the HGP generates the raw data needed for new “breakthroughs.” Approaching rapidly are new pharmaceutical products, new ways of “enhancing” the human condition, new definitions of disease and “disorder,” and a worldwide

industry mobilized to create and fill new needs through biological manipulation. Covering this front is “We Don't Gotta Show You No Stinkin' Gene Screens,” an interview with Dr. Paul Billings, a genetic discrimination specialist (page 46), and Primitivo Morales' look at the history of eugenics and the state of the art in genetic screening, “Pissing In The Gene Pool” (page 34).

Curiously, we already know an awful lot about improving human health but don't implement it. We could provide basic preventive medicine through universal, freely available health clinics, adequate prenatal care for all pregnant women, adequate housing and useful participation in society, and decent sanitation, sewage treatment, and clean water, to name a few. This year, a quarter of a million people in South America have already contracted cholera, a disease for which the solution has been known for over a hundred years: clean water and enclosed sewers. Claims that biotechnology alone can vastly improve human health will divert attention and resources away from such pressing problems.

In much the same way, agricultural biotechnology diverts resources and research from such worthwhile goals as sustainable agriculture and puts the emphasis on new technological fixes. Food production is where the debate over the releasing of genetically manipulated organisms into the environment is hot and heavy, although it is only a more attention-grabbing part of



MENACING HEAD
by Paul Klee

the field. Biotech companies are developing or considering the creation of transgenic species of plant and animal; cloning and in-vitro propagation of animal embryos; harnessing of microbial interactions; genetic pest and disease control products; and the use of crops as feedstock for the chemical industry. See Tom Athanasiou's "Greenwashing Agricultural Biotechnology" (page 16), Robin Wheatworth's "The Quest for Microwavable Pasta and Other Vital Needs..." (page 13), and Sam Bulova's "Shadowboxing The Future" (page 51). And check out PW 22 for a good look at diminishing genetic diversity in Mark Leger's "Plants Bursting With Energy." Our biotech issue also looks at life on the lab bench in Chudaman Royale's "Biohell," and in "A Genetic Engineering Pioneer," an interview with Swiss-trained Brazilian geneticist Marco Schwarzstein, who has left the field because of terminal suspicion towards science. This interview, along with a brief report on Cuban biotechnology ("Castro's Genes" on page 41), hint at some of the promise/hype and problems of this new technology in the Third World.

As multinationals develop bioengineered substitutes for a wide range of vital export crops like sugar, cacao, and vanilla, the suffering of millions of already poor farmers and peasants intensifies. A new biotech peasantry is being "engineered" in tropical forests and other genetically rich hotspots as the new raw material producers suffer the same old fate: low prices, expensive imports, and ever-increasing debt. Crushing poverty in places like the Amazon, with its unplanned, chaotic urban sprawls, usually without basic running water and sewerage, ensures the availability of "human resources" for a nightmarish biotech future.

The absurd claim that "transgenic" creations, like the more mundane herbicide-resistant crops and bovine growth hormone (BGH), will somehow end world hunger clearly shows how some scientists can so lose themselves in arcane technical detail that they completely fail to understand what is going on around them.

Increases in agricultural productivity might be of interest to people who simply need food that they're not getting. But increased production is a big problem — because it bears no relation to specific need and is not coordinated with distribution. Instead of simply delivering the surplus to the needy, the

government buys it and holds it back from the market to maintain prices. This allows *most* farmers to pay their debts (good for banks, y'know) and keeps the "system" going.

A technological breakthrough in this environment does not change its logic, unless other forces in society pressure it to do so. Predictably, the industry leaders will gain greater market shares and drive out weaker competitors. So while new biotechnologies may help increase food yields, *unless there is a break between having money and being able to eat*, surpluses will just create problems for the "price stabilizers."

PLANNING? WHO WANTS TO???

The promise of biotechnology, like

any promise made by the leaders of this society, should be put to popular scrutiny. As with any new technology, we should have some way to learn about it, evaluate the changes it may bring, and decide what needs it should address. But we don't make decisions about ANY changes that take place in our lives, so how can we suddenly assert a public right to control our latest whiz-bang technofix? As it is, most of us don't really care about the "why" of *what we're doing at work now*. If we can't get worked up about how we spend our lives, what chance is there that we'll confront the ramifications of new technology? This is just a glimpse of the enormity of our problem!



DRAW COLUMBUS

Liar Slaver Murderer Thief

FUTURE THEMES! Please SUBMIT articles/tales of toil/graphics/fiction/poetry on Immigration, The "New" Patriotism, and Education, for upcoming theme issues.

The biotech research scientists themselves are not even involved in determining the nature of their work. Our various tales of toil from inside the corporate biotech world demonstrate repeatedly that research and development priorities are set by the marketplace, not by the pursuit of Truth or the satisfaction of human needs. In a sidebar to a salary survey in the September 1990 *Biotechnology*, scientists complained of a lack of support from the company hierarchy and "not enough participation in decision making." This frustration indicates that the front line scientist is already at odds with the money boys & girls. Can we imagine scientists redirecting biotechnology away from mere commercial ends?

To evaluate biotechnology or any technology, we have to have values and a vision. These are not something we are much encouraged to develop.

Part of *Processed World's* vision is abundance in general, with less work and a balanced ecology. This is what biotechnology seems to promise (see "Greenwashing..."). Instead of saying STOP, we say "we want the goods, but the marketplace can't provide them, and will actually obstruct our ability to determine our real desires." Our vision of a free society is not any more "natural" (or unnatural!) than the mess we're living in now. A socially and spiritually free, ecologically sound, and materially abundant life takes democratic planning. We know the results we get by leaving it up to the same corporate and governmental elites that have had their way for decades.

Debating the nuances of technological change may seem irrelevant in the absence of social control over society's resources, including the work it does. Nevertheless, we must continue to stimulate this debate. Since the mid-1970s, grassroots movements have challenged the experts on nukes and offshore oil drilling, as they now do over AIDS treatment. In the momentous shift to bio-engineered production, we must determine what we want before we can be in a position to influence the outcome of events.

AMBIVALENCES

Restoring the earth absolutely depends on the successful implementation of biological knowledge. Advanced biotech makes this more possible. The blurry line between analysis and intervention has been crossed. If we want to understand



photo: Bean

what we've done and begin clarifying how to make it "right" (a concept which is, inevitably, a human construct too), we need to understand and analyze life and ecosystems at both the cellular and the systemic level. That is what basic biology allows us to do; how capital turns it into products is quite another story. Genentech's refusal to develop a malaria vaccine, which could quickly make a huge difference for tens of millions, is a sordidly normal example of decisions driven by the profit motive.

Biotechnology also encompasses reproduction and contraception, which further complicates simple opposition. Freedom from procreation requires safe, efficient and invisible contraception. But like any product, contraceptives come to us at the expense of those who produce them. The personal sexual freedom provided by contraception is contingent on others—to say the least! Because we have no control over research and development, a disproportionate share of research goes into female contraception. The inadequacy of contraception in general leads to the "moral crisis" of abortion, an issue Angela Bocage fumes about in "Reproductive Rights Rant" (page 57). Don't we all wish for a new birth control fix—safe, easy, without side effects or ecological repercussions? How do we develop the social imagination to conceive of and fight for the technologies we want, in the face of an agenda set by capital?

Of course the U.S. government has been actively engineering a good business climate for biotechnology. The Supreme Court did its part by ruling in favor of the *patenting of life forms*. Without guaranteed property rights, investment in new life forms would be

drastically curtailed. The first imperative in the national biotechnology policy report of the President's Council on Competitiveness (chaired by that famous scientist/intellectual, Dan Quayle) is to "re-emphasize technology transfer from government-supported research institutions to commercial practice." Plans are also underway to remove federal regulations that apply only to biotechnology and abandon public oversight of the process in favor of cursory regulation of the products.

THE SLIPPERY BIOTECH SLOPE

Every time we are drawn into an argument about the safety or efficacy of a particular innovation, we abdicate on the larger questions. Why this? Why a "product"? Why are we going down this road? What kind of life do we want, and will this help us achieve it? At what cost?

We're speeding to Hell, few people think life is getting better, and the human condition and global ecology are worsening at a precipitous rate. A thoroughgoing overhaul is long overdue. We work far too hard doing things which are destroying us, and have no clear vision of how to make life worth living—or the means to do so. But we must create them!

* * * * *

On *Processed World's* traditional turf, this issue takes a look at the miseries of working in law with two tales of toil, "People's Ambulance Chaser" and "Temporary Coding." We're excerpting a chapter from "Generation X," a great new book by Douglas Coupland. Just published by St. Martin's, it captures the *Processed World* experience to perfection. "Bar Raps" is a poetic account of life behind the bar. Our DOWNTIME! section features a warning about the still-not-dead nuclear industry "Mutate Now, and Avoid The Rush," along with great letters and poetry to round out the issue. As always, we crave your response. Write to us. What do you think?

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Fax (415) 626-2685

We are always seeking new contributors of graphic art, cartoons, photographs, reports from workplaces, stories about daily life, tales of toil, poetry and fiction. We pay nothing! Getting in print is its own reward. (ha ha).

LETTERS

More On Good Jobs

Dear PW,

Thanks for sending issue 26/27, another fine issue, though one article ("Ambivalent Memories of Virtual Community") managed to deflate a dream of mine in one fell swoop. It seems that we should be able to apply what we have learned about hierarchy and make it stick. I feel your contributors for 26/27 failed to do this. One after another enthusiastic egalitarians fell (or were pushed) back into the manager/worker/consumer roles. I'd like to see a follow-up questionnaire asking: "What happened? Were you or your co-workers polarized by apathy or responsibility? Was it the outside pressure of too many other institutions saying 'Not you, let me talk to your supervisor!?' Was your group structured like the corporate world and planning only to listen to each other and thinking good thoughts?"

In my experience, groups work well when their members respect each other independent of the job or role and share an interest in the purpose of the group. This holds true in my job, social and political groups and probably others. It fits with my anarcho-feminist politics; organizational hierarchies obscure lines of real respect (do I like her because she is concerned and cool or because she is in control of my life?) and fossilize a particular group's purpose.

Along with whatever issues of respect, fossilizing the purpose of a particular group sure sounds like a part of what G.S. Williamson and S. Colatrella have run up against. The groups I've appreciated being involved with decided what they would do based on what the people within them valued rather than on some Grand Scheme. Considering the importance of Grand Schemes (Make Money! Save the Earth! Provide Service X!) to how we organize ourselves and our expectations, it's not surprising that the sort of groups I like are usually either "social" (i.e. pagan groups I've been in) or "subservient" to a larger group who impress their Grand Scheme upon lower echelon groups (i.e., teams I've been on at work).

Please do more with the idea of Good Work. More tales of folks who made it, both as stable entities and in organizations worth being part of. Kelly Girl ("Kelly Girl's Good Job" PW 26/27) has the right idea. I have been working as an independent contractor and the control over one's work life is great. The only downfall I see in this realm of work is that it doesn't have much camaraderie and can be somewhat meaningless. Let's hear more!

—J.B.P

Petulant Ravings?!!

Dear PW,

Let it be known that the petulant ravings of the disgruntled former Wheatville employee have their groundings in the frustrations of a rebel without a cause. Certainly Wheatville is not perfect, but having worked there myself for over four years after experiencing many other types of counter-cultural jobs, the place definitely shines forth. Since one usually comes to the decision to work, the beauty of working at Wheatville is in its tolerance for most everyone and its atmosphere of free thinking. Many of the co-op

employees at Wheatville were able to come to terms with certain personal issues and establish a few ideals in the safety of that environment. I suppose the opinions expressed in "Beatnik Managers and Tye-Dye Bureaucrats..." (PW 26/27) were the author's way of working out a few of his own issues, however I must say that working with him was a drag.

As he mentioned, he looked for ways not to work; not everybody had that same attitude. And for those interested in sharing the responsibilities of co-oping, he was a definite thorn in the side. It is true that the pay was

THIS MODERN WORLD by TOM TOMORROW

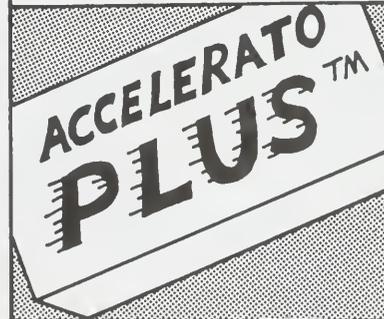
SAY, BILL -- WE'VE JUST DISCOVERED A MINOR ARITHMATIC ERROR IN OUR RECORDS AND WE NEED YOU TO REFIGURE OUR CORPORATE FINANCIAL RECORDS FOR THE PAST FOUR DECADES... CAN YOU GET THAT TO ME BY FIVE?



SURE, BOSS! NO PROBLEM!
BOY! IT SOUNDS LIKE I'D BETTER TAKE SOME ACCELERATO PLUS™!



ACCELERATO PLUS™ DOUBLES YOUR METABOLIC RATE-- SPEEDING UP YOUR SENSE OF SUBJECTIVE TIME SO THAT TEN MINUTES SEEM LIKE TWENTY! ONE HOUR SEEMS LIKE TWO! JUST IMAGINE! YOU'LL BE ABLE TO WORK A SIXTEEN HOUR DAY-- IN JUST EIGHT HOURS!



BOY ACCELERATO PLUS™ REALLY WORKED FOR ME I FINISHED THAT WORK FOR THE BOSS AND HAD SO MUCH TIME LEFT OVER THAT I LEARNED A FOREIGN LANGUAGE AND READ THE ENTIRE ENCYCLOPEDIA BRITANNICA AND NOW I DON'T KNOW WHAT I'LL DO MAYBE STUDY BRAINSURGERY--



WARNING: ACCELERATO PLUS™ WILL REDUCE YOUR LIFE SPAN BY 50%, BUT JUST THINK OF HOW MUCH YOU'LL GET DONE IN THE MEANTIME...

low and the usual benefits were thin, but in defense of the management at Wheatsville, the true benefits of working there were not monetary, something all who worked there knew. What Wheatsville does offer is a fantastic social connection to many people of the community involved in social alternatives and counter-culture. The work at Wheatsville is not hard or stressful, the atmosphere is one of acceptance and fun. I honestly don't think Robert Ovetz was doing much more than venting his acidic spleen.

—Janet Blondeau, S.F.

Nature is Amoral

•By Projecting Your Anger
You Will Never Examine
Your Life

•Love is a Process
•Try Plan B

No God, No Master
No More If Onlys
#You Are Here

1395
WHY

Collective Stupidity is the
Real Conspiracy
#Art is Infection

1495
BREATHE

Hope for Happiness

Freedom is Dangerous
Stay Awake
#Habits Kill

2395
TALK



PACCARPARTS
A DIVISION OF BARRON

Stoned Socialism?

Dear Editors,

In part, the Institute for Stoned Socialism is continuing the work of Abbie Hoffman. In part, we take radical Christianity in Brazil (in its organized forms numbering in the millions) and its relationship with the Workers' Party as a model.

Your article on the Green Conference (PW 22) was interesting. We take a less dim view of worker-ownership. In my own case, working on my gardening business is a VAST improvement over the \$4.75/hr. mail delivery job I had for Crocker Bank in the Financial District. "Tired of bosses? Make them go away," (see below) was written from my experience. When there is a more favorable "business climate" for socialism, my skills can be applied to affordable housing co-ops and neighborhood parks. I'm also going to help a guy I met start a catering business, so he can get rid of his \$6/hr. cook job (he's now living out of his van).

When it comes to worker-ownership, I can really get into the entrepreneurial spirit. This is something we can do NOW (though it is limited) to help people begin freeing themselves from exploitation. It's better than whining endlessly and waiting for the Perfect Revolution to establish Pure Communism.

At the Institute, we expect radicalism to be a major "growth industry" in the coming period. "At the Institute for the Development of Stoned Socialism, we're bullish on the '90s."

—Psychedelic Socialism, c/o General Paper, Box 162, 12250 San Pablo Avenue, Richmond, California 94805

TIRED OF BOSSES? MAKE THEM GO AWAY.

(excerpt)

Get Out of the needless grind of life under capitalism.

Get In to the quietly stoned serenity of WORKER-OWNERSHIP.

- Abolish alarm clocks forever. No forced rush in the morning. Get up when you want to, start work when you want to, end work when you want to. Take lunch when you want to, and make it long and languid if you like.

- Cut commute time by 75 percent, by scheduling work around the Rush (it's no longer just an hour), and avoiding the Lemming Parade altogether.

- NO exploiters and overpaid executives taking a fat, juicy cut of the wealth your labor creates.

- End ass-kissing and ugly office politics. Office politics remain under worker-ownership (unless you are on your own)—but on an entirely different basis, because the people **doing the work** decide democratically how it is done and who gets paid what.

- Get rid of obnoxious clients or customers. If your product is good and reliable, most people will be decent.

... After the rude pain of the coming economic downturn, the coming left-wing period will open up unprecedented opportunities for worker-ownership.

... EMANCIPATION IS WORTH WORKING FOR.

Institute for the Development of Stoned Socialism

"Where we're getting Stoned on Reality."

Humanism?! Christianity!?!?

Dear Sir,

Please cancel my subscription to your "Processed World." Your "Humanism" is out of style and is just some off-shoot of Christianity. Be honest with yourselves and join the Beast in you like I did. Narrow self interest is the nature of us ALL. Accept it.

Thank you.

M.P., prisoner—Stormville, NY

Later for London

Hi There!

Good to hear you're still going strong. I dislike authority anyway, but since I moved to London from Scotland I've grown to detest it with an almost pathological hatred. The fairly loose squat scene I was involved in is being hounded now. The riots last year over the Poll Tax have been used as an excuse to persecute "undesirables," i.e. squatters, anarchists, people who don't conform easily. London is not a place to get too excited about just now.

Anyway, I hope California is a bit better — at least you've got the weather for being unemployed in.

More power to your keyboards,
Love, Iain

Attitudes Everywhere

Dear Processed World,

I just bought the "Bad Attitude" anthology. I found it quite humorous, and I'm glad to see a leftist/anarchist publication that talks about such things as you do from a working person's standpoint. Although I am an unskilled blue collar worker, I could sure relate to the articles, cartoons and tips on how subversion can start in the workplace. Not that I wasn't doing some of those things (time theft, free copying, etc.) already! I work in a somewhat upscale department store in Minneapolis, but not (thankfully) for much longer. After I quit in a few weeks, I'll take some time off, and then resume working, but only part-time. Anyway, the department store may be upscale, but my job sure isn't. Inhaling dust, exhaust fumes from nearby trucks, and an overbearing boss (What's that? You have one too? Naahhh!) don't exactly constitute ideal circumstances.

Bye now.

D.S.—Minneapolis, MN

Postal Gulag

Dear PW:

You don't know how long I've wanted both to submit something, and to tell you how much I enjoy PW. For a long time I've worked for the Postal Service as a letter carrier. The Postal Service is a world which makes most government gulags seem like vacation day camp. Freightied with a two-century legacy of authoritarian, type-X management, it manages to alienate and enrage nearly every once-human who walks through its steel swinging doors, ready for the big bucks. But a year later, they've either turned into voidoids or closet mass-murderers. Anyway, I've been writing down the notes, making the poems and stories of this work for more than thirteen years. I still haven't been able to gain the distance necessary to really write the story down the way it should be told.

PW's article a few years back on San Francisco's bicycle messengers made me think that PW might be interested in picking up a few of these excerpts, journal entries, etc. I don't know, though, because more Marxist-leaning folks among your editorship might go along with the majority of America, who think that the mailman is overpaid. If they knew, if you knew just how dearly and in what forms we pay, I suspect they'd change their minds.

Anyway, I'm not including any of this postal material, yet, only querying. But the stories!...

From the Gulag,
Dr. Bolivar Shagnasty, Montpelier, VT
(Yes, doctor, send in your postal material. We are veerry interested—Ed.)

The Collar of Money (A Slacker's Lament)

Dear PW:

I've noticed a pattern developing over the years. It seems as if every so many months I

TWISTED IMAGE by Ace Backwords © 1991

have to abandon my well-intended Protestant work ethic for the sanctuary of unemployment. I'm what the human resources types derisively call "a job hopper." I get a job, buckle down and perform for a few months, then invariably something goes stale and I have it out with someone, or business conveniently "slacks off" and out the door I go.

I've had to look at this problem from all sorts of viewpoints over the years. Some of them paint me in a worse light than others, and they usually take the form of harsh self-analysis with emphasis on what is clearly my maladjustment to social conformity. And by contrast, of course, there are those which herald me a proud, misunderstood heroine, dignity in my kerchief, solemnly trodding the Road Less Travelled.

Demographically everything should work. I'm white, I'm middle class, I'm white, and I like television. Why then, don't I like being white collar? Maybe it was the time the operations manager at the ad agency where I was a secretary/copywriter/coffee mug scrubber advised me to grow my fingernails longer and have them manicured, and while I'm at it, learn to control my "gratuitous remarks." Or possibly the time, while working as a secretary for a temp agency, I enjoyed the responsibility of "running" down to the deli and picking up 6 grown men's lunches, bringing them back to the office and serving them up microwave-hot on real tableware, with sodas in ice-filled tumblers. Maybe it was that time I got fired for "not closing the door properly," or the job where part of my daily duties included walking the boss's dog and picking up the poop. Oh I know! It had to be the time I was asked to work overtime with no pay as an "investment" in my future...

I'm no company joe, never have been. Neither was my father, and my mother used to rail at him about his lack of "initiative." It is her voice I hear when I find myself griping about "inappropriate requests" or circumstances which "compromise" my "dignity." I hear her telling me to "grease your teeth with Vaseline in the morning so that when you grimace your lips slide up and they think you're smiling." I hear her voice on the phone, tittering up the fiber optic cables from Palm Beach, decrying my everlasting "bad attitude."

I used to think it was my low status around the workplace that fostered my rebellious spirit. I reasoned that once I got to be a white collar professional I would suddenly command respect, fairness, and personalized "from the desk of" notepads. Not so, I found out. When I finally became an account executive in a public relations firm, I found that after taxes I was making less money than I was as a secretary!

I quit that job last week. I lost my temper when the boss refused to negotiate a more livable hourly rate. I seized the laundry list of "to do's" she'd given me and said, "fine—you



do it!"

I've decided that it's the white collar world that keeps me from being "a success." I just don't think I want to "get on a career track." Nobody I know can appreciate this, because after all, I'm bright, college educated, articulate, and talented to boot. Why wouldn't I want a job title that leads to a better job title that leads to a mortgage, a car phone, a "check your stress level" paperweight, a secretary named Bev?

I often write poems at work. Once, as a word processor in a headhunting firm, I processed this, then dashed over to the printer to make sure nobody got to it before me:

Office plants
have seen the advance
Of the Information Age.
What will you give them for their silence?

When I am in an office I am mostly like a plant. I just don't get the point. I wonder why everyone else around me appears to. Then I wonder if maybe they don't either. I don't

think anybody does.

But like everybody else, I need the money. Only now it's really getting tough. The recession does not smile upon those of us who are still sucking wind from the '80s. I'm down to tempting offers of "challenging, foot-in-the-door" opportunities to answer multiple phone lines, xerox, sort, collate and staple important documents, and "juggle many diverse and interesting people." Yeah right... I don't have to translate, do I?

Something's gone bananas with this world, and I think the baby boom generation is responsible. You see, in the sixties we got used to having values and purpose, and although the experiment failed we are still really attached to the idea of being important somehow. So we've gone and attributed emotions formerly of personal realms to our so-called "professional" lives. We are now "committed" to our career goals, and we have "drive, enthusiasm and passion" for our work, which in turn "fulfills" us. Of course,

Can't wait for more Twisted Images? Write Ace @ 1630 University Ave., Apt. 26, Berkeley, CA 94703.

what have we left? In the sixties our politics failed us, and in the seventies our "selves" did.

I've been unemployed for 3 days now, and I have no income and no prospects and no "initiative" and I don't care. I've totally burned out. Maybe like the loaves and fishes my bank balance will forever multiply and I'll never have to revise my resume again. Maybe meaningful work will manifest itself to me in a brilliant, life-shattering flash. Maybe I'll wake up tomorrow and resolve to try it again.

Maybe the spaceship will come by soon and pick me up.

—Kathleen Quinn

The Game Is The Problem

Dear PW:

I recently bought my first copy of Processed World, and it is bringing to the surface all those questions I have about the nature of work, what is happening to this planet — and what my place is in it. For 8 1/2 years, I worked in a so-called "helping profession" in New York, assistance to crime victims. The people I worked with were often victims for life, not knowing any other way to live. They accepted abuse because they had been raised with it by people who had themselves been abused, ad nauseum, ad infinitum. Occasionally, I felt I was helping someone; over time, however, I burned out on the revolving door of victimization, on the cynicism of those for whom I worked (and yes, on my own cynicism), and on the fact that the criminal justice system treated no one as human, not even those who worked within it. I needed a change of venue, and in April of last year, I moved to San Francisco.

Since then, I've worked in various jobs, mostly temping. I've been near the bottom of the employment food chain. I've also seen how abusive and self-destructive the top of the food chain is, and my choice is "none of the above." I've seen ulcers and heart attacks in the making, among people who are basically good, and all for the sake of selling more useless crap to people who don't need it, so that the people who are selling can themselves make more money to buy more useless crap, sold to them by people who want to buy more useless crap themselves.

Early on, we are taught how little power we have over our lives. We are trained to give in and be content with our share of the pie. We are **not** taught how to be happy; that is not even in the curriculum. Today, lip service is given to preserving planetary resources. United Way and other charities collect money for, no doubt, worthy causes. But we live in a society that is, at heart, a deadly and self-destructive organism, and this is reflected in what people are trained to think of as good work habits. Give it up for the company, y'all.

The major factor in my awakening to the

photo: D.S. Black



nature of abuse and self-abuse was getting clean and sober in 1981. As I began to treat myself and others better, it became more obvious how badly our institutions, private and public, treat us. As my eyes began to open, this societal toxicity became clearer. These institutions are managed by other people, who have numbed themselves to the consequences of their actions, and who are therefore less than human, and try to bring the rest of us down to their level.

I don't have any answers for anyone else. As a veteran, in my pre-teen and early teen years, of the antiwar movement of the '60s, I don't see hope within the left; they are playing the same game, and it is the **game which is the problem, not who is winning it**. . . The thought that the civil rights movement has brought us a Clarence Thomas is depressing, gay rights activists, feminists and others lose me when their aim becomes not to transform this society, but to be co-opted into it. It comes down to how I treat myself, how I treat you, how I treat this planet. And that includes the choices I make with regards to the way I earn a living (what a nauseating phrase that is!). Three years ago, I chose to become a vegetarian for this very reason—I wanted to do something for myself and not have to kill (physically or psychically) anything by doing so. This month, I begin graduate school to gain entry to the kind of work that (a) I can enjoy, and (b) won't hurt others, and might even help someone. Yes, I want all that useless crap, too, but I'm not willing to step over a certain line to get it.

—Anonymous by fax from PG&E, San Francisco

The War Comes to Zapicho

Notice of the War in the Persian Gulf was communicated to Santa Cruz Zapicho on several dozen television screens that the "comuneros" (townspeople) had hauled in over the newly-paved road from the "fayuca" (contraband electronics) markets of Zamora or Uruapan or else handcarried home from California and Texas, where the young men here still disappear every year for whole seasons at a time. What Zapichans were told about the hostilities in the Gulf was pretty much the same mendacious disinformation that was repeated ad nauseum to U.S. audiences: that Saddam Hussein was Hitler, that the Iraqi military was an even match for the U.S.-led Coalition's Killing Machine, that the Mother of All Battles was being waged to promote peace, democracy and economic well-being.

These baldfaced lies were conveyed into the little wooden homes that Tarascan Indian residents of the Michoacan highlands call "trajes" via skeletal antennas that received CNN transmissions as funneled through Mexico's bankrupt state government network, "Imevision," or the Televisa repeater channel tuned to the communications giant's worldwide ECO system.

"Are the oilwells still burning?" Erasma Garcia questioned me, glancing up from her grinding stone. And then, "they never bombed New York, no?" The set in the corner of her mother's drafty kitchen was dark now—it had finally blown a tube midway during the war, she said. She had been watching the morning Pentagon press briefing when it died and blamed the Americans for the TV's demise. "They bombed the television towers" she proclaimed, convinced this explained the breakdown in communications, and gathered the tortilla mass into a large, floppy ball. Erasma had trucked her 12 inch Zenith 1500 miles from Tijuana where she lives and works several months a year in one of the border city's bursting garbage dumps.

Dona Tere began slapping out the tortillas. She told me how she'd picked up a little of the war in Purepecha from the National Indigenous Institute station down in the municipal seat of Cheran. Had I been in Iraq since she last saw me, she asked politely. I said I'd been in San Francisco, trying to convince George Bush to stop bombing villages in Iraq that looked a lot like Zapicho. "The Americans killed many many people over there," Dona Tere said gravely to her daughter. They began slapping the tortillas together.

I described how we had blocked a bridge up in San Francisco, in California. Miguel Baltazar, who builds whole villages inside empty "charanda" bottles when he's not working his family's cornfields, claimed that he had heard the protestors on the little transistor he has plugged into his ear these days.

"They killed a quarter of a million people probably," I told Miguel, "we'll never know how many. We had to do something. The Americans were bombing the schools and the marketplaces and the air-raid shelters."

SERVICE SPECIAL Storm the Reality Asylum

- The Snakes Are Living in the Most Unbridled Technology
- Keep The Sharks From Your Heart
- Labels Limit More Than Empower
- Paradox is the Threshold of Truth

Mighty Few People Think What They Think They Think

- Perpetrators Become Victims of their Dominance
- Only Drugs Make You As Happy as the People in Ads
- Life is More Important Than Literature

Learn By Going Where To Go

0000

graphic: Warsaw, June 1990



Goyo, 89, and Miguel eyed the fragile roof. "Hooch kah" Miguel breathed in the firelight, "that's what we thought." He translated what I had said into Purepecha for Tata Goyo who has gone stone deaf in Spanish and can only lip read his own language now. "Ho" he nodded vigorously as Miguel flicked off my information about the massacre. The word "paz" came up often in their interchange and I was surprised the Tarascans do not have their own word for it. "Hooch kah, Juanito" Goyo muttered, "that's just what we thought happened over there."

"I didn't pay much attention to what it said on the television—all the news broadcasts are dominated by the PRI anyway," Santiago responded when asked what he'd heard about The Other War. "Down in Cheron, the Cardenistas explained that Iraq was just defending its social rights when it took over that other place and so that is what I thought about the whole time. That Saddam was just doing what we were doing here in Zapicho, taking back what was ours from the rich and powerful. The Imperialists never stop trying to enslave the poor..." Santiago said that he had wanted to write Saddam and tell him all this but he didn't quite know where to send a letter. He handed me a schoolhouse notebook and I wrote out an address: "Saddam Hussein, Domicilio Conocido, Baghdad, Republica de Iraq." "I don't know that their mail system is any better than Mexico's," I joked, "The Americans bombed all the post offices..."

—John Ross, S.F. & Michoacan

ers from Bob Hope to Arnold Schwarzenegger.

While we live in the here and now, PW consistently contrasts this world with a vague alternative that never existed, laying blame for the ills on this earth with the individuals who live upon the doorstep of capital. Surprise, surprise, money changing hands strains, stains, deforms, destroys relationships...

What of human nature and non-monetary based power relationships? Who really is shocked that progressive jobs can be exploitative, or that politically correct employers can be nasty people? Politics is abstract: where we live is in our bodies and in our daily lives. It's in our bodies and daily lives we fail many of the standards we set for others.

Which brings me to Med-o's contribution to last issue's Talking Heads. By admission Med-o has a "good job," as a self-employed electrician and scam artist.

What irks most about Med-o's high righteousness are his paragraphs on the war in the Middle East, which take abstraction to new depths. He smugly labels the military as a "good job," while going into no detail about the working conditions and the pay scale. He has no comment on the loss of personal liberty and the regimentation. Med-o makes no distinction between the enlisted

and officer classes, and is not interested in racial make-up and discrimination. In summation, he offers no alternative save the generic concept of resistance and offers up his solidarity with resisters on a silver platter.

Does Med-o know anybody who has considered this enticing employment opportunity? I don't, but then I suspect like most people associated with the PW collective, I was brought up with certain expectations. I have family and/or friends with money and/or resources if times turn bad. Most members of the collective are not members of racial minorities, and seem to have been raised in middle class surroundings.

The Republican "blame the poor" mentality has no trouble sitting in judgement. Neither does Med-o.

If we blame those who sell out to the military, let's also blame our parents and ourselves for paying rent, taxes, or eating in restaurants while others starve outside.

As to Mordicus, I'm all for dada, agitprop, whatever it takes to get people to think, to wake up. Out of curiosity, who among the PW collective has been compelled to go home and break their TV after reading it? It doesn't apply to Us, how about "scalping journalists?" Well, no we're not really, in the conventional sense of the word, journalists.

—klipschutz

Sitting In Judgement?

Dear PW,

Count me in for a "livable job," "a vision of a twenty-one hour work week with a thirty percent hike in pay as a concrete demand for the present." (Frog's review, PW 25.) I'm all for the world without pain, suffering, inequality, want. Then we can move on to the real questions: How much is enough? Is death intrinsically evil? Beauty, Truth or Both? Why Love?

Many of the work-related "bad attitude" pieces in PW are written by folks who don't want to work, period, which is great work if you can get it. But, neither successful unemployment nor finding a "good situation" personally is a social solution. Rather they are examples of finding a niche of mobility for select individuals, as preached by think-



graphic: I.B. Nelson

MY BEST JOB

The best job I ever lucked into was a “work-study” gig as the research assistant for an epidemiologist. My boss, Joel, was the typical absent-minded professor. In retrospect, I can see that he was a brilliant bio-statistician, but at the time I was more aware of his comically nerdy appearance and laudably relaxed management style.

Joel was the junior member of a research duo investigating the environmental causes of cancer. The senior member, a suave and famous scientist, wrangled grants and handled PR. Joel, I suspect now, did all the actual research. He was an assistant professor in a tiny, newly formed department—Environmental and Occupational Health Sciences—at the state School of Public Health.

I worked half-time, 20 hours a week, on a pay sheet I filled out myself (very generously). Joel really didn't mind how much I worked, or how many hours I claimed. He would give me a list of articles to hunt up, and as long I produced the data he was happy. His life was so disorganized that being able to delegate this arcane but vital task was a relief to him.

At the time I considered myself to be getting a very cushy deal, but I realize now that I was, in fact, giving pretty good value. Tracking down medical research data is a tricky task. It's not easy to find someone who can penetrate the jargon *and* work for student wages. I enjoyed hanging out in the library and the challenge of digging up an obscure study or squeezing raw data out of a reluctant researcher.

I also got along well with my co-workers, not easy for an oddball like me. Everyone in EOHS shared two characteristics: we were a) radicals and b) underpaid.

Any serious look at the environmental causes of cancer quickly turns up a fact so obvious, so blatant, so patently true that it seems trite to pronounce it: industrial pollution is the major environmental cause of cancer. The huge corporations producing most of the carcinogenic waste pump millions into research obscuring this fact. However,

Industry is rich and the Public is not.

There was not a single person working at EOHS who couldn't get paid at least twice as much (for some, ten times as much) doing the identical job for “the other side.” Anyone who stayed was either an idealist/radical/environmentalist, not very serious about Advancing Their Career, or too weird to hold a mainstream job. Most were all three.



Every study we published was immediately challenged by literally dozens of big name researchers. It didn't seem to matter that they were directly funded by corporate polluters.



Joel was focused on his esoteric research. He wasn't insensitive to Advancing his Career, but he wasn't one of the (far more typical) academic careerists who research only what will get them tenure and promotions. He seemed content to let Sam, his collaborator, hog most of the glory. As a teacher he was unpopular. His stuff (advanced biostatistics) was far too arcane for most students to follow, even if he didn't speak in an unintelligible mumble, and he had no talent for intra-departmental power struggles. He depended on Sam's clout to shield him from hostile administrators and competitive colleagues.

Sam, the department head, was the least oddball, most mainstream, and

fastest-advancing careerist in the outfit. He frequently spoke on TV, wrote environmental books, fished for the slippery but huge federal grants so vital to research, and fought the inter-departmental battles. EOHS was his creation and power-base. His famous name went on the top of all the research proposals as “principal investigator.” This meant he got a personal percentage of the funds and top billing on any published studies.

I think Sam was a sincere crusader, but he was no blind idealist. He always managed to profit personally from his “selfless” crusading. When one of Sam's lab workers complained of unsafe working conditions (lack of adequate ventilation in a carcinogen lab), he was swiftly fired — this in an outfit supposedly dedicated to defending worker safety!

The rank-and-file ranged from mildly liberal Sierra Club types to committed radicals of various stripes. I ranked towards the bottom. At the time I was an openly gay revolutionary socialist, showing many early warning signs of Bad Attitude — not exactly Fortune 500 material. Had I been interested in anything other than sex, drugs and the Revolution, I could have been using my position as a good “in” to a lucrative career in biomedical research. But I wasn't, and to me it was just a high-paying (\$6 an hour—good for a student in 1980) low-hassle job.

So we were a pretty counter-cultural crowd. There was a minimum of hierarchical bullshit, and we were all sincerely dedicated to the cause. Environmentalism was a popular and growing issue, and we were proud to be at its cutting edge. I don't think any of us ever dreamed, 12 years ago, that our work would be so completely ignored, and that Polluters would triumph so completely over Defenders of the Environment.

That we were out-numbered and out-gunned was obvious. Every study we published was immediately challenged by literally dozens of big-name researchers. It didn't seem to matter that



graphic: M.C.B.

M.C.B.

"I was an openly gay revolutionary socialist, showing many early warning signs of Bad Attitude; not exactly Fortune 500 material."

Even so, I naively hoped that Truth Will Out. Our case was so strong, our studies so clever, that I didn't see how they could fail to triumph. As I learned to search out flaws in research, I found that much of the opposition's work was blatantly faked (see "Sleazy Research Tricks").

But none of this seemed to matter. "Everything causes cancer!" people would say, disregarding any specific lab report on carcinogens. What we called "Lifestyle" theories of cancer were becoming increasingly popular — studies "proving" that high-fat diets, or smoking, or Bad Attitude were "responsible" for cancer.

And these lifestyle theories were quickly picked up and promoted by secondary interests — the stop-smoking clinics, the weight- and stress-reduction programs, and various Power-of-Positive-Thinking scams.

After all, our studies led to conclusions that nobody liked. The environment was becoming increasingly toxic, billions would have to be spent to clean it up, and dozens of profitable industries providing millions of jobs would have to be curtailed (or at least rendered less profitable). Where would one even start to remedy the situation? It's so much easier to start a low-fat diet than it is to save the environment!



they were directly funded by corporate polluters.

Nor was the playing field for publishing level. The editors of the major journals were all members of the medical Good Old Boy network, and they instinctively took a dim view of radicals and environmentalists. We had a much harder time getting articles published than the industry apologists did.

Finally, our work had little potential to "pay off" in standard academic terms. Pleasing a major industry could easily result in millions of research dollars, a lucrative consulting career, and/or a Chair at a prestigious university. In fact, entire universities have been created/funded by Industry (e.g., Carnegie Institute).

Our major source of funds, aside from federal grants, was unions. They were a natural counterbalance to business interests, at least in the matter of occupational risks. But they had nowhere near the money, and none of the academic clout, of the major corporations. They were David facing Goliath, and we were their sling.

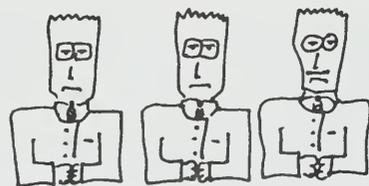


graphic: M.C.B.

M.C.B.

"In retrospect I can see he was a brilliant bio-statistician, but at the time I was more aware of his comically nerdy appearance."

Ultimately, we depended on support, both moral and financial, from federal environmentalism to maintain this unequal struggle. When Ronald Reagan was elected we were doomed. The Reagan administration, like Bush's after it, was slavishly dedicated to "Business" interests. The Environmental Protection Agency was one of their first targets, and it was soon reduced to chaotic impotence. Funding for projects like ours was cut off as fast as possible. My layoff (along with many others) was announced within weeks of Reagan's victory. Within a year the entire operation had been shut down.



graphic: M.C.B.

M.C.B.

"The editors of the major journals were all members of the medical Good Old Boy network, and they instinctively took a dim view of radical environmentalists."

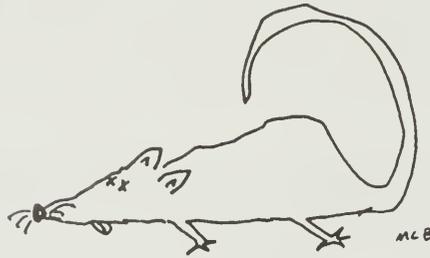


Environmental & Occupational Health Sciences was soon cannibalized by its jealous sister departments. The rank-and-file dispersed. Some of the shrewder, less idealistic researchers found ways to market "environmental" studies so they fit in with Lifestyle theories — for example, researching the effects of "secondary" cigarette smoke on non-smokers in the same room. Joel lost his academic appointment and moved to another state and I soon lost track of him. Sam alone is still at the School of Public Health, producing well-reasoned critiques of the ever-popular Lifestyle theories of cancer.

Much of what made my job at EOHS so good was that I was working for a decent boss in a tolerant workplace. But the cards were stacked against us, Joel and me both. Mere competence is rarely enough. The Carter years were an anomaly, and EOHS a heavily protected environment, a kind of wildlife preserve for absent-minded professors and radicals. I only wish I'd fully appreciated it at the time.

—Kwazee Wabbit

SLEAZY RESEARCH TRICKS



graphic: M.C.B.

“COMPETING TOXICITY”

According to the rules, theories attain the status of Facts after they have been rigorously tested by reliable, replicable, high-quality research. In practice, a substantial body of published studies in The Best Journals (e.g. The Big Three: The New England Journal of Medicine, Science and Journal of the American Medical Association) supporting a given theory establishes it as a Fact.

Often, however, the harried researcher, pressed for time in the pursuit of lucrative grants, or frustrated by studies that refuse (for unknown reasons) to produce the desired results, has recourse to certain shortcuts.

Some of the most popular time-savers are listed below. This is far from a comprehensive listing, but it gives a general idea of what you can get away with. Get a big-name scientist as co-author, the backing of a Prestigious Research Institute or University (“backing,” in this case, can be as minimal as use of PRI’s letter-head and mailing address), and you’re in business.

Important Note: The underlying active ingredient in any of the following ploys is usually a powerful “Tell us what we want to hear” effect. If your study “proves” something the prospective funder wants to believe, there will rarely be any problem.



M.C.B.

“CIRCULAR REFERENCING”

CIRCULAR REFERENCING: Researcher A mentions, in a footnote, that Compound X has been “proved” completely harmless. Researcher B quotes A, and is in turn quoted by Researchers C, D and E. The next time Researcher A discusses the topic, he cites the papers by B, C, D and E as further proof of his original claim.

If someone tries to pin you down on your original footnote, cite a “personal communication” (i.e., phone call or unofficial letter) with another scientist. It’s best if your personal communicant lives far away, is difficult to reach, and doesn’t speak English; or, better still, is dead.

STEP-WISE EXAGGERATION: Famous Researcher A publishes a study proposing that smoking is responsible for 8 percent of all lung cancer. Researcher B cites this study, saying that smoking is responsible for “nearly a tenth” of all lung cancer. Researcher C translates this to 10 percent, and Researcher D points out that since smokers are only half the population, this 10 percent is really 20 percent (logically this makes no sense, but on a fast reading it SEEMS to).

Researcher E casually refers to D’s paper, giving the statistic as “almost a quarter” of the population (having forgotten that it was only smokers that D was talking about). Finally, Researcher A, upon reading E’s report, notes that current studies show that smoking is responsible for three times as much of the lung cancer as he originally thought (i.e., 25 percent instead of 8 percent). When A’s statement is published — prominently in several major daily newspapers — Researchers B, C, D and E all triple their previous estimates, citing the highly respected A. Thus, the original 8 percent has ballooned up, in E’s revised estimate, to 75 percent.

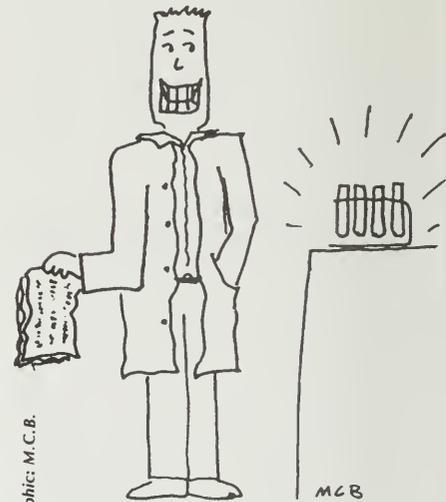
NAIVE SUBTRACTION: Dr. Industry decides to estimate the environmental causes of cancer by taking the known cancer rate and subtracting all “proven” sources of cancer from it. By using generous estimates for these causes — preferably “lifestyle” factors, like smoking and diet — Dr. Industry finds that

only 2 or 3 percent of all cancers are “unexplained.”

This tiny, residual number thus becomes the ceiling figure for environmentally-caused cancers.

DRY-LABBING: To “dry-lab” a study means to fake it; to make up the numbers without actually bothering with all those test-tubes and things (thus leaving your laboratory nice and clean — i.e., “dry”).

The chances that anyone will ever ask you to produce your original lab reports and notebooks are pretty slim. Recent experience shows that even if a lab worker sells out and denounces you, they are unlikely to be believed. Of course, someone could replicate your study and fail to get the same (i.e., faked) results; but you simply accuse them of screwing up somewhere. It will take, at the very least, several years for anyone to sort it all out.



graphic: M.C.B.

“DRY-LABBING”

COMPETING TOXICITY: The Fed has demanded, as a precondition to licensing, that DeathCo’s new product, Liquid Death, be tested for its potential to cause cancer. So DeathCo gives Liquid Death to 17,000 mice — but at a dose so high that they all die within weeks. Since it usually takes several months to develop a tumor, very few cancers are reported.

Such a high death-rate could be some cause for concern; however, the Fed didn’t ask “how many mice will drop dead in weeks?” it asked “how many will develop cancer?” DeathCo’s study is published as “proof” that Liquid Death doesn’t cause cancer — “even when very high doses are administered.” This proof will stand, unchallenged, until someone with 17,000 spare mice decides to replicate the study.

—Kwazee Wabbit

THE QUEST FOR MICROWAVABLE PASTA AND OTHER VITAL NEEDS . . .

When the agricultural research group where I work first formed, it was looking into new ways to produce hardier and more productive cereal crops. There were four scientists, all Ph.D.'s in their mid-thirties. Edgar, a chemist, was running the show; Pete, a biochemist; Rob, a plant physiologist; and Sergio, an agronomist from Central America. I was hired as their secretary and bookkeeper. Our little outfit was funded by a large industrial group which had decided to diversify its operations and explore agriculture.

We had a couple of small labs and a greenhouse on site. Cereal varieties were analyzed and tested in the greenhouse by Rob. Potentially interesting varieties were crossed to make superior cereal lines using a non-toxic chemical method developed by Pete. Then Sergio would supervise test plots out in the Sacramento Valley to see how the plants actually performed in terms of added yield.

The pace of the work was moderated by the seasons. In November they planted in the fields, while during the spring, lab and greenhouse work continued. In June we would go out to the hot valley to look at the results — maybe 20 acres of test plots of old and new varieties of grain, all turning green to gold under the strong sun. The hybrid plants showed obvious new traits, some very short and close to the ground, some nearly as tall as us, some with good seed set, some with poor seed set, some beset by disease, and some thriving. The crops were harvested and taken back to the labs for analysis. In autumn the planting cycle began again.

The program continued like this for several years. In agriculture they call it classical breeding. Desirable traits are developed in a hit-or-miss manner. You take one plant with a good strong trait, you cross it with another plant with other good traits, and you hope the resulting offspring will combine all the desired traits. It's a long, slow process. The produce in the supermarket represents decades of development.

Our small group expanded with the hiring of a few more associate scientists for the chemistry work (one from Taiwan and one an immigrant from mainland China). The first woman scientist of the group was a botanist hired to assist with lab and greenhouse work.

We were a long way from any sort of actual product, and Edgar was getting

Imagine the implications of spraying all the timber plantations in the semi-wild with herbicides. But there is no research into these ecological consequences.

nervous about continued funding. The parent company seemed ambivalent, and Edgar thought we needed a hook to keep them interested. So Edgar, being an enterprising and up-to-date scientist, launched a huge lobby for a genetic engineering program.

Genetic engineering of plants really represents a quantum leap over traditional plant breeding. Instead of a trial-and-error procedure that lasts a decade, you can potentially identify, isolate and introduce a new gene into a plant in a year. The parent company, after some struggle, was won over to the wave of the

future—the allure of reaping profits from the newborn science of plant genetic engineering.

During the next couple of years the tone of the operation took on a totally new dimension. We constructed the latest in high tech labs in addition to several million dollars in equipment purchases. We hired a whole new group of credentialed scientists in the disciplines of cell and molecular biology. Men and women in their 20's and early 30's, these scientists were the hotshots from the latest university genetics programs.

In the new structure, Edgar became the scientist administrator. Pete and Rob continued the original work in biochemistry and plant physiology. Sergio spent all his time at the field station. Tim, a bright and driven Asian-American, was the Ph.D. running cellular biology. Stephanie, an intelligent Ph.D. of few words, was running molecular biology. The cell and molecular groups each had a retinue of young new-breed genetic scientists, mostly Americans, three more Taiwanese, one east Indian and two Europeans.

The workplace became a lot livelier. The group until then had consisted of your basic dedicated bench scientists, pretty much locked into their fields, sports being their main outside interest. The newer group consisted of generally younger singles who attended concerts, liked sports, paid some attention to the media, drove new sports cars and met socially outside of work. A few of the new scientists professed interest in environmental causes and set up in-house recycling of paper and cans.

SPECIALIZATION AND ITS DISCONTENTS

When the new labs opened, a rift developed between the original scientists and the new group. In science these days, molecular and cell biology are "in." Chemistry and biochemistry still play a

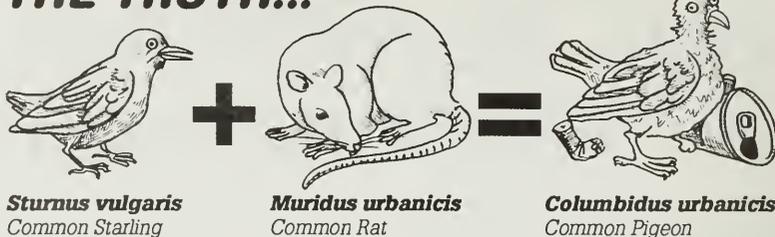
basic role, but biological disciplines such as physiology, which considers the whole organism, are "out." At the universities, all the aspiring biologists want to study genetics. As a result, their overall outlook tends to be limited to the microscopic level at best.

For the first few years of the genetic engineering labs, Rob, the plant physiologist, was down in the dumps. He had been counseled that his specialty — the study of the overall plant and how it reacted with the surrounding environment — was no longer where it was at. To be more employable he needed to get into molecules. When the labs developed plant lines that had to move into the greenhouse, and then outdoors into an actual field, it became apparent that the molecular and cell people didn't know the first thing about whole plants. They didn't consider, for example, that if you move a gene that influences a certain stage of growth, it might affect the overall maturation of the plant. At that point it was decided that the plant physiologist better give a few quick seminars to the rest of the group. His dignity was partially restored until the young assistant botanist transferred to the cell biology lab to rev up her skills. Now Rob can't find another assistant to hire. He told me, "They don't train people like me anymore." This man is 39 years old!

A QUICK HISTORY

Observing this episode with Rob, and seeing the whirlwind changes brought by genetic engineering, made me look more closely at what was happening. It's been barely 20 years since the first gene splice. The field of molecular biology, initiated

GENETIC ENGINEERING REVEALS THE TRUTH...



...PIGEONS REALLY ARE FLYING RATS!

Graphic: Trixie T-Square

by Rockefeller Foundation grants in the mid-1930s, has finally come into its own during this past decade and a half. It has received tremendous research and development funding.

1970s: For the first time molecular biology succeeded in controlled manipulation of genetic material. Pieces of genetic material were successfully moved from one organism to another. In 1975 the international scientific community, awed by the magnitude of this breakthrough, held a conference at Asilomar, California, and actually declared a moratorium on all genetic research until enough was known to control this emerging technology.

1980s: The business element in the scientific community gained enough influence to reverse the scientists' moratorium. Huge venture capital investments

were made as genetic engineering research again proceeded at full speed. The door was opened wider by a 1980 Supreme Court decision granting the first patent on a process for genetic manipulation to Stanford and UC Berkeley. It was astonishing in two respects. It was the first patent on a life form, and it was the first time academia formally entered the business world with a patent. During the 1980s, investment poured into medicine and agriculture to develop applications.

1990s: After ten full years of major investment there are few significant biotechnology products on the market. Research takes time and the developing technologies have barely matured. Biomedicine is a little closer to bringing products to market than is bioagriculture. The venture capitalists are getting very anxious and are pushing hard for products.

Under this pressure, there could be a whole series of useless and/or damaging genetic technology spin-off applications, such as herbicide tolerance. Not only is industry usurping the new technology to protect its earlier investments in obsolete technology, they are also in a mad rush to commercialize and get immediate returns on investment before the technology's potential is even halfway realized.

In an infinite range of possibilities, the industrial sponsors are having a bigger say than ever before in what science is actually developing. The universities are busy organizing academic biotechnology consortia to facilitate the flow of basic research to industry (in return for funding and a piece of the patent action). The

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graphic: Mickey D.

ties between academia and industry, always present, have reached unprecedented levels in the case of biotechnology.

HERBICIDE TOLERANCE

Genetically engineered herbicide tolerance is an interesting case in point, though it's not a project at the labs where I work. The agrichemical companies became the biggest backers of genetic engineering of plants in the early 1980s. They invested early, and financed full scale in-house research labs. Finding a specific gene that carries a specific trait is one of the difficulties of genetic engineering.

The scientists in those labs isolated the gene for herbicide tolerance during their continuous testing and studying of how herbicides act on plants. The agrichemical companies now have an "isolated herbicide tolerant gene" that they can move into crops that are plagued by weeds, like cotton. A farmer sprays his cotton crop like crazy, the cotton thrives, the weeds don't grow, and the company sells genetically altered crop lines and more herbicide than ever.

This herbicide tolerance is actually one of the few genes currently isolated, identified and in the stage of advanced product development. In many other agricultural labs the rush is on to get to market with a similar product in order to stay competitive. It is very likely that some of the first genetically engineered plants will be herbicide resistant varieties, both crop plants and forest timber trees.

The research stops here—the skills developed toward gene isolation and manipulation are put on hold while the rush to product development takes over. Imagine the implications of spraying all the timber plantations in the semi-wild with herbicides. But there is no research into these ecological consequences—research dollars are committed to bringing products to market as soon as possible.

YES, BUT HOW DO THEY FEEL?

Back in our labs, the push is on. I've asked a number of scientists how they feel about herbicide tolerance being the pilot product of genetic engineering. How do they feel about the way the technology they develop is actually applied? Stephanie smiles, and though she is the leader of the molecular biology group, she just shakes her head and says she's glad herbicide tolerance isn't one of

our projects. Rob also shakes his head, doesn't say anything. He's already had the funding pulled out from under projects he's worked on at two other labs, losing his job both times. He's not too anxious to make any statements. Pete, busy at the chemistry bench, shrugs his shoulders and acknowledges that funding is everything. "You work on what they are willing to fund."

Steven, one of the younger scientists, once confided to me that the herbicide tolerance work is dangerous. He was labeled a liberal by the rest of the group for being against the attack on Iraq. This relatively mild political stance made his lab mate so uncomfortable she stopped speaking to him. He recently left the labs to go back to graduate school and study environmental law. Two years ago another young cell biologist left for law school. He, however, was going to be a patent attorney.

Stephanie, Rob and Steven, the dedicated bench scientists, are not the driving forces of the operation. There is another career track in the labs, the scientist turned businessman/manager. Tim, the cell biology leader, is competent and professional, and definitely a candidate for the business track, although he

rather ruefully told me one day, "I went to graduate school in the '70s. The structure of DNA had just been identified. It was incredibly exciting. The scientists in those years had a say in the direction the discovery could take. There was a tremendous amount of debate on the responsible application of the science. I never would have believed then that I would end up working in industry." He now is wholeheartedly committed to the projects assigned to him.

Edgar has been sharpening his business and management skills, and has teamed with go-getter Matt, who is a Ph.D. in biochemistry turned MBA. Together they have plans to take our group to the top, to be first in both technology and business development. They are a fair representation of what science is these days: competitive and very business oriented. Not long ago I heard Matt comment, "we've got the solution, now all we need is the problem." He was talking about some finding on altering the starch content in wheat that had the potential of being applied to pasta production. It turns out that the big food processors have a problem with pasta microwavability — the pasta gets mushy.

—Robin Wheatworth

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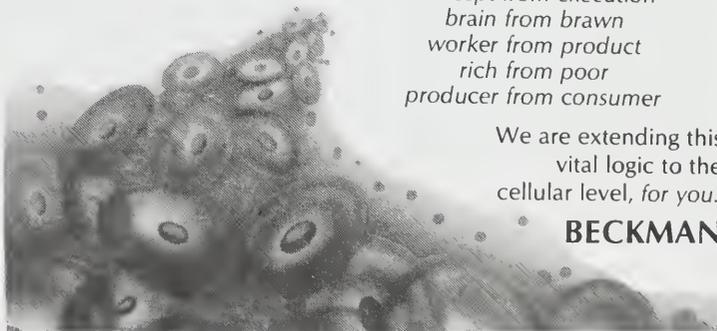
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GREENWASHING AGRICULTURAL BIOTECHNOLOGY

Aspecter haunted the Third National Agricultural Biotechnology Conference (NABC-3), held earlier this year in Sacramento, California—the specter of ecology. One felt its presence almost immediately, when a more-or-less generic industry hack, Ralph W. Hardy, president of Boyce Thompson Institute, gave an obviously well-rehearsed rant against radical environmentalists. Nothing special—just your standard environmentalists-as-anti-technology-Luddites-who-want-us-to-freeze-to-death-in-the-dark-stuff—but the crowd loved it.

As the day wore on, though, it became obvious that Hardy's old-school ideology wasn't the only item on the menu. This sterile hotel conference center was host to some notably up-to-date, even experimental, forms of greenwashing. Biotechnology was no longer, as in the early 1970s, being framed in Promethean, steal-god's-thunder, engineering-of-life terms. Now it's just a science of genetic "modification," not so very different from brewing or bread making. As one recent volume, *Agricultural Biotechnology: Issues and Choices*, put it: "biotechnology is around us every day, just as it was for our ancestors." Today's techniques, from gene splicing to industrial cloning, are just a bit more precise, but this is only an evolutionary—not a revolutionary—difference.

Still worried? Better get used to it! There were lots of midwestern research homeboys here to explain that in a time of rising population and famine, productivity is the *only* important fact of agricultural life. The world needs more food, and biotechnology is the only practical way to provide it. Ask British multinational ICI Seeds, which has devoted an entire publication, *Feeding the World*, to arguing that biotech "will be the most reliable and environmentally acceptable way to secure the world's food supplies." Or ask Eli Lilly, a transnational drug company that's diversifying into biotech: "We will need dramatic progress in the productivity of agriculture to limit starvation and the social chaos which overpopulation will bring."

Biotechnology has its critics, of course, but they are largely naive urban dwellers who don't even realize they're speaking for starvation! In fact — and this is the real kicker—biotechnology is the key to making the "sustainable agriculture" we all want more practical. It'll even make it



Biotech is being shaped not by the aesthetic joy of fundamental science, or even by the hard-headed practicalities of a world on the edge of mass starvation, but by "the nature of its being a product."



possible to phase out dangerous chemical pesticides and herbicides (in favor of new "biopesticides") without suffering catastrophically reduced yields.

Ecology was, in other words, the theme of NABC-3. We were even shown a slide of some agricultural research buildings surrounded by high cyclone fencing, and invited to bemoan the precious funds wasted protecting such facilities from marauding bands of "technology-hating Luddites." Then we got a report on progress towards "more efficient cows" able to produce more protein per measure of fodder. This is an

especially twisted homage to ecology, for the realization that cows are "inefficient" producers of usable protein, and that there would be plenty of food to go around if people ate less meat, traces directly back to Francis Moore Lappe's *Diet for a Small Planet*, first published in 1971 by Friends of the Earth.

Welcome to the future, where "sustainability" — the vaguest term in the environmental lexicon — joins "productivity" as the basis of the campaign to once again equate technology and hope. And why not? Sustainability is like apple pie — everyone loves it. The tough questions concern how the apples are to be grown, and if the wheat in the crust should be a mix of native varieties or a high-tech hybrid. The answers to these questions are significant both as propaganda and as agricultural technique. In fact, it's beginning to look like the biotechnology industry has, to some extent, chosen research programs suitable for backing up its new claims to be environmentally friendly.

If you doubt these claims, don't make the mistake of assuming that others share your suspicions. As Walter Truett Anderson put it in the NABC-3 keynote address, "Environmentalists tend to be very suspicious of technological fixes, but the general public has no such reservations. Technological fixes will do fine. They will not only be tolerated, they'll be demanded."

Anderson as keynote speaker is itself notable. Anderson is a regular at the Pacific News Service, a left-liberal outfit with a love for the offbeat, but not necessarily radical, angle. An "environmentalist" with career ambitions in apolitical mainstream futurism, Anderson is the author of *To Govern Evolution: Further Adventures of the Political Animal*, a book in which he steps back and takes the big picture of biopolitics, counting it as encompassing everything from ecosystems restoration to genetic engineering, industrial policy to the dilemmas posed by emerging medical technologies.

Anderson was speaking at NABC-3 because he sees biopolitics in a way that, if not altogether flattering to the biotechnology industry, is actively hostile to the radical green culture, which he claims makes "a religion out of being frightened." The inevitable reality, according to Anderson, is that from now on nature must fall explicitly within the ambit of politics. Evolution must be managed, whether we like it or not! It's an abstract assertion, though true enough — the problem is that Anderson was clearly speaking, at this conclave of industry functionaries, as one manager to his fellows.

LUDDISM: JUST SAY NO?

In 1986, a group of radical greens stole onto the grounds of Advanced Genetic Sciences, near Davis, California, and destroyed a strawberry field that had been sprayed with a "genetically manipulated organism" named Ice Minus. The media attacked them as "Luddites," but they were hardly offended. I know one of them, and he wears the label "Luddite" proudly. Not that my buddy (a graduate of MIT) is the enemy of "technology" in general. Better to say that he opposes biotechnology because he sees it as embodying the interests of a dangerous and perhaps insane society. In fact, the real difference between him and all the millions of others who harbor fears about high-tech society may be one of degree — and, of course, that he has found occasion to express his feelings on a few benighted strawberries.

Is Anderson wrong, then, to claim that most members of the "general public" will welcome technological fixes — especially if things get much worse? It's impossible to say. Technological utopianism, an old and well-established tradition that thrives in apolitical America, endures despite the decidedly bad reputation that science and technology have picked up in the last 20 years. The spirit of the day is ambivalence, composed of equal parts of dread and technofixism. Terminator 2, the killing machine as good guy and responsible father, is our perfect mascot.

The fog of fear and television keeps most of us from getting a clear fix on the core institutions of society, the institutions that shape the machines. But the machines are right before our eyes — easy to admire, to desire, to fear. They promise ease and comfort, or at least

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images of ease and comfort. Unfortunately they seem as well the agents of a new and threatening world. What better response than confusion and ambivalence?

Among environmentalists, science and technology are topics of daily conversation in a way that would have surprised the early radical critics of technoscience — Lewis Mumford, for example, or Herbert Marcuse. The ideas of such thinkers find an unprecedented popularity in the green movement, though their precise histories are rarely known. The odd thing is that among the greens these ideas find a strange company of fine, strong radicalism, and bucolic simple-mindedness. Regrettably, green radicalism seems to somehow depend on the simple-mindedness, to lean on it for support and fortitude.

The perfect case in point is Jeremy Rifkin, the man whose inspired fusion of legal activism and highfalutin' anti-biotech proselytizing has virtually defined the battle against genetic engineering in the United States. A self-styled "heretic" who has made it his mission to lead a prohibitionist campaign against biotechnology, Rifkin has worked hard to find solid theoretical ground for his politics of almost complete refusal. He has found it in a theory of "species integrity" and the morally transgressive nature of biotechnology. Not coincidentally, this theory has been widely influential among biotech's deep-green foes.

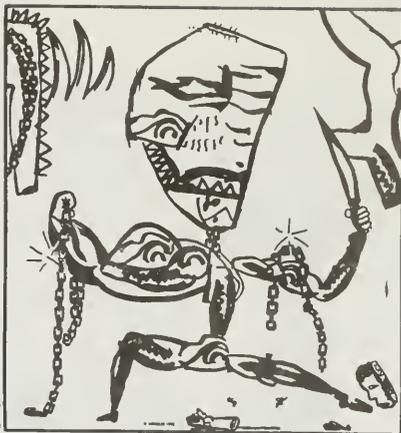
It's difficult to criticize Rifkin's ideas without seeming to fall into league with an industry that would happily see him dead, yet it is important to do so. Rifkin has come to stand for the politics of technological taboo, and has defined the issues raised by biotechnology in an overblown way that — though catalyzing both attention and opposition — has also led us into an ideological backwater from which it will be hard to escape.

Rifkin's attack on biotechnology is — to use the jargon of the day — essentialist. What he is telling us is that the fundamental techniques of the new science, those that mix genetic materials between animals and between species, are *irredeemable* expressions of a drive to subjugate nature and of a mania for "efficiency." It is a position that is close to the truth, but not close enough to make real sense of our predicament.

Rifkin, like almost everyone else who has tried to find a politics of technology that is *both* radical and popular, punts on the really tough question. How does one simultaneously focus on the momentous macro issues raised by the new technologies, and the all-too prosaic social institutions that shape them? Instead, he draws a line in the sand, charging biotechnology with the sin of reducing species to information sequences, and then going on to mix these sequences without regard to their "sanctity." It is true, but only in caricature — all detail,

political as well as scientific, has been banished. The issue becomes simply "Should we play God?" Stephen Jay Gould, one of our finest evolutionists, has described Rifkin's *Algeny* as "a cleverly constructed piece of anti-intellectual propaganda masquerading as scholarship." In fact, his work is so undermined by shoddy overgeneralization that its major points of interest may be its popularity and the part it has played in mobilizing a campaign against biotechnology.

At issue here are the politics of fear and exaggeration. The larger ecology movement often relies on campaigns much like those that Rifkin uses to organize resistance to biotechnology. Note that while Rifkinite hyperbole backs an



graphic: D. Minkler

Free market Designer chains

agenda most of us would probably support, it hasn't actually stopped, or even significantly slowed, the overall

development of biotechnology. In fact, it has helped prompt the current effort by biotech's boosters to position it as a green technology, and worse, it has theoretically disarmed environmental activists in the bargain. The new "we-feed-the-hungry" line is a strong one, and may succeed in washing most of Rifkin's accomplishments off the map.

All of which is to say that a shortcut politics of refusal (Luddism) was never enough, and certainly will not do today. "No nukes" is not enough. "No biotechnology" is, at best, a sad joke. If you don't think so, ask a friend with AIDS. Consider why AIDS activists and greens—who would seem by their common interest in the politics of science to be natural allies—disagree so deeply about

BIOHELL

The facility was crude, a tacky converted warehouse with office dividers, ugly carpets and a U.S. map displayed to give the impression that Biohell was larger than it was. The lab area was a converted kitchen (linoleum floors intact) with lunch tables covered with biotech gadgetry. "This is where you'll be working, Chudaman," Tony told me. "This will be your desk, that one is mine. That is, if you want the job."

I took the job without thinking twice. I'd be getting \$16,000 a year, with medical and dental insurance, paid sick leave, vacations and holidays. Because it was a young business, I would be able to "grow with the company," taking on responsibilities usually reserved for people with four or five years experience at more established companies. There was even the possibility that I would get stock options when they went public!

I didn't realize that I could have made much more money elsewhere, even at an academic research lab. My benefits didn't include disability or pension and the stock options were just a scam. The "important responsibilities" were just a euphemism for "working even harder, for longer hours, for the same low pay."

Initially, the job was enjoyable. Tony treated me like a friend and equal. We would talk and goof off instead of working. We shared the work equally when we did work. Things began to change, however, when Tony moved into sales to try to make more money. He was moved into his own office where he "would no longer have any distractions." Soon he was moved to Poughkeepsie to be a district representative for the east coast. After several months of low sales, he was canned and left to rot in New Jersey with only two months severance pay.

My new boss was Rajiv, president of the company. One of his grand plans was to market chromatography columns to the oil companies to help them clean up spills at

sea. The most likely source of energy for these pumps on a boat would be oil itself; perhaps he should have looked into a pump that powers itself with the crude oil it sucks up, a perpetual motion machine.

Rajiv always watched me, noting what time I came and left and how long I took for lunch. He came into the lab every hour to check up on me. "You're not an hourly worker," he would tell me. "We have no time clocks here or strict hours. You're paid a salary to get a job done. If it means working more than eight hours occasionally, then you work more than eight hours."

This attitude prevails in the life sciences. Technicians are expected to work until a job is completed, often within a rigid schedule. Some bosses allow their technicians to leave early if an experiment is completed, knowing there will be other days when their employees will work late. Others, like Rajiv, say this is their policy but then find extra work on short days. This policy is justified on the grounds that some experiments take more than eight hours to set up and run to completion and that it's sometimes impossible to stop an experiment at certain steps without ruining the results. However, virtually any experiment can be planned so that there is a convenient stopping point within an eight hour day. Bosses in the biotech industry overwork their technicians because they want to get more productivity for less pay.

Often new experiments would be started late in the day rather than allowing the employees to leave early. Work is given us to take home or we are expected to come in on the weekend. Sadly, most workers accept this as a normal condition of their employment. Many believe they are fulfilling an obligation. Others see a 50-60 hour work week as justifiable in light of their "high" salaries.

At some point during my employment at Biohell, I was informed that I would have to work on production—in addition to my normal

job of research and development. Rajiv made me take over Tony's old job of technical service as well. This would be short-term, he assured me, but it lasted the rest of the time I was there.

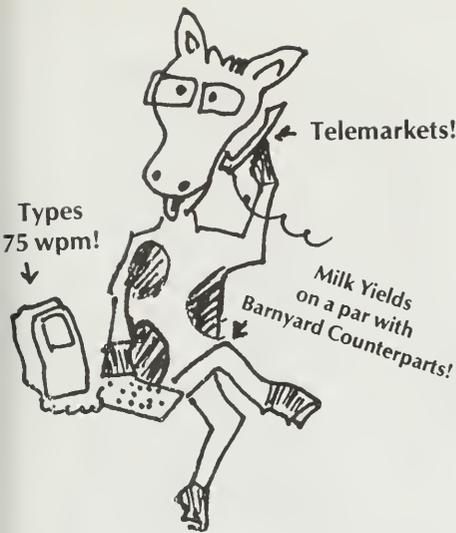
Technical service entailed calling up the customers and checking on their progress with Biohell products. It meant dressing up in a suit and tie and going out to their labs to fix problems. I had to kiss up to irate, frustrated customers. I often caught a plane at five o'clock in the morning and had to fight traffic in a strange city in a cheap rental car, not to get home until after 10 or 11 p.m. Management considered it a privilege to travel for free, as if I was on an all expenses paid vacation. The only privilege I got on these business trips was to eat out on the company expense account, usually at a greasy truck stop or fast food joint since the customers were located in suburban nowhere.

Fed up, I began to work as slow as possible, taking care of personal business at work, making long distance calls to friends. During my technical service work, I would make no more than two calls a day and claim the lines were busy. I refused to pick up the phone when customers called, telling the secretary, through the intercom, that I was in the middle of an important experiment.

As for research and development, I'd forget to order basic supplies, chemicals, glassware, etc. I could delay an experiment for weeks this way and create "free" time. I became very clumsy around expensive equipment.

All my sabotage brought me great satisfaction and gave Rajiv stress and frustration. Finally, he called me into his office and with a grim expression, explained that the company was not doing well financially. "We can no longer afford to pay for your position, Chudaman." I ran out of the office whooping it up, straight to the unemployment office.

—Chudaman Royale



Graphic: M.C.B.

“MORE EFFICIENT COW”

genetic research.

The widespread anti-biotech politics is not, and cannot, be coherent. Better to see it as a statement of purpose, a seeking after a radical biopolitics that does not yet exist. Radical greens call for a revolt against the engineering mentality and the domination of nature by an exterminist industrial capitalism. Opposing biotechnology seems like the right thing to do.

Radical greens are trying to come up with a politics as revolutionary as technoscience itself. And why not? The daily papers are heavy with articles about synthetic growth hormone extending human lifespans, and even about plans for increasing the efficiency of photosynthesis. Meanwhile, the left press runs the odd piece about DNA as key to a new generation of biological weapons. A certain fear is appropriate, and only the industry's PR flacks think we should stop worrying and love the clone.

I can agree with Anderson's big-picture definition of the biopolitical battleground, if not the false impartiality in which it is framed. Biopolitics *does* include everything from the politics of extinction to the ethics of life extension and the economics of artificial growth hormones. And, as Anderson points out, agriculture — where biotechnology meets ecology — is on the front lines of the battle.

Shall we see biotech as do the radical environmentalists, the ones for whom that expensive chain-link fence was built? Is there any alternative in a debate

defined on one side by reductionists like Rifkin who argue that biotech violates some essential sanctity of life, and on the other by an industry PR apparatus that seeks to frame biotechnology as high-tech beer making?

It is a tough question. Biotechnology is a product not of any magical inspiration, but of a long process of gradual refinement and innovation. Yet biotech really does seem to be revolutionary, more evidence for Hegel's old saw about quantitative changes adding up to qualitative ones. DNA is, at bottom, a script, and biotechnology a writing technology. We may never be able to equal the works of evolution, that grand playwright, but we do seem to be learning to read—and to plagiarize. It's a prospect that *should* scare us, especially given the nature of the institutions within which these breakthroughs are taking place.

BIOPOLITICS ON THE GROUND

The biotechnology revolution is overwhelming in its implications; no argument here. Still, we must deal with the issues it raises without immediately falling back on abstractions like “the sanctity of nature” and “technology.” Such concepts put too much stress on the large and the mythic — not always the

wrong thing to do, but dangerous if specifics get pushed into the background. Who's doing what to whom? — this is the primal question of politics, and biopolitics is no exception.

In the case of agricultural biotech, the specifics are Bovine Growth Hormone (BGH), pesticide- and herbicide-resistant crops and all the other high-tech farm products. The myths of the biotech revolution are best tested by examining such specific facts. Is BGH a violation of the metaphysical integrity of the cow, or a fancy new way to make money? (\$250 million has been spent on development alone, and some estimates peg annual sales at \$2.5 billion.) The answer makes a difference.

In *The End of Nature*, Bill McKibben — who hews to the deep-green line — quotes a grotesque British work named *Future Man*, in which future genetically-engineered farm animals are celebrated for their efficiency and productivity. The “battery chickens” of the future, “whether they are being used to produce eggs or meat,” will no longer look like birds. Biotech will allow us to design chickens without the “unnecessary” heads, wings and tails. “Nutrients would be pumped in and wastes pumped out through tubes connected to the body.” Lamb chops will be even better, since they will be grown on a production line

JAWS O' DEATH STRENGTH OF SAMSON!

Graphic: Mickey D.



“with red meat and fat attached to an ever-elongating spine of bone.”

The more one knows about the marriage of biotech research and corporate agriculture, the clearer it becomes that — despite its horror — such a system of meat production would most likely be put into practice as soon as it was technologically feasible. Jonathan J. MacQuinty, the president of GenPharm (which has developed the ability to alter cows so that their milk contains human proteins like lactoferrin, useful for treating both cancer and AIDS), recently set us straight on the nature of farm animals: “We think of them as cows, but these are actually self-feeding, self-replicating bioreactors.”

Some environmentalists are soft on biotechnology, though not as many as Monsanto would have us believe. To be sure, crops altered to resist pests without chemical pesticides have a place in a green future. There are even those in the environmental movement (more of Anderson’s persuasion than of McKibben’s) who have begun to talk about a biotechnological “soft path.” Still, the real question isn’t if such a potential is there (it almost certainly is) but if there’s any good reason to think that it can be

realized in this society. It is a very different question indeed.

Even herbicide-resistant crops *could* be helpful, depending on the herbicides they’re resistant to. It doesn’t take much research, though, to learn that real-world product development is running along lines altogether askew from those implied by the rhetoric of the green-washers. New developments in herbicide tolerant crops, for example, are not limited to developing less toxic herbicides (the “potential” that the green critics of agricultural biotech are forever being reminded of). Rather, agricultural biotechnology is being developed in ways that almost guarantee that it’ll become just another escalation in the ecological war between biochemicals and insects.

Margaret G. Mellon, director of the National Biotechnology Policy Center of the National Wildlife Federation, also spoke at NABC-3 — and it was clear that she in no way fit Anderson’s stereotype of the emotional green Lud-dite. Mellon made the most important point of the day: biotech is being shaped not by the aesthetic joy of fundamental science, or even by the hard-headed practicalities of a world on the edge of

mass starvation, but by “the nature of its being a product.” That is about as close as anyone can come, these days, to publicly saying “by its nature as a commodity.”

That it is shaped by its “nature” as a “product,” the dirty public secret of biotechnology is as well the secret of information technology, energy technology and just about any other kind of technology you care to mention. The PR flacks may sputter about how bioscientists are hunched in their labs, working hard so that little Johnny and Juanita will have enough to eat in the dark days ahead — but it’s bullshit and they know it themselves. Agricultural biotechnology is being shaped by the corporate farms and the academic/corporate network that stands behind them. This is the world of chemical monoculture, of factory-floor farming and dying rural towns, of mealy apples and tasteless tomatoes that never ripen. Hundreds of millions of dollars have been spent developing BGH because some executives somewhere think they’ll make a killing. End of story. Sustainable agriculture is only a convenient lie.

Margaret Mellon didn’t come right out and say all this, of course. Instead, she

took industry rhetoric at face value, and argued that biotechnology can't *lead* us to a new, sustainable agriculture, and that by "siphoning off scientific talent into genetics rather than ecology, I think it's actually going to make it harder for us to get to where we ought to go." She's right, but this is only the beginning of what could be said if there really were free speech. Her plea to directly pursue specific goals (like sustainable agriculture) rather than fixating on high-tech approaches to those goals (like biotechnology as a possible contributor to sustainable agriculture) is a soft, safe way of saying that we should be making social choices and then developing technologies to help us along the road to those choices. True, of course, but the matter is altogether too important to be left in such abstract terms.

There's little hope without a reversal of the ecological crisis, and little chance of such a reversal in the First World alone. Sustainability means nothing unless it applies to the Third World, where populations are booming and ecosystems ravaged by hungry peasants and slum-dwellers turned pioneers. And in the very concrete social world of Third-World poverty there's no hope for sustainability without *land reform on a grand scale*. Massive cash-crop plantations must be broken up into small holdings where peasants can safely establish themselves. This is the forbidden truth behind the rhetoric of "sustainability," the truth that will never be discovered while the conversation remains locked in technoscientific frameworks. Here, as everywhere, if you want the truth — the social truth that shapes the scientific truth more deeply than most scientists imagine — you have to follow the money.

In the real world, controlled by the planetary corporations and constantly reshaped to their benefit, biotechnology will have a starkly negative effect on Third World peasants — just the opposite of a radical land-reform program that had nothing at all to do with biotechnology. The future is already visible in research now focused on coffee, chocolate, sugar, vanilla and other "cash crops," research aimed at developing bioengineered substitutes for such traditional agricultural products. Most such substitutes are still very experimental, but even in the short term biotech can be expected to accelerate the shift from small farms to large-scale plantations by promoting techniques that smallholders

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cannot afford — like machine-harvesting techniques based on bioengineered hybrids that all ripen in perfect, machine-like unison. In this, biotechnology's impact in the Third World is likely to be similar to the effect it will have here at home. BGH, for example, will increase the costs of doing business as a dairy farmer, thereby promoting larger herds and concentration of ownership.

The "potential" of a technology must be clearly distinguished from its likely applications, and science cannot be abstracted from either social context or technological form. The Human Genome Project is a fine example — it is a frightening development, but not because it reduces life to "information," as a die-hard Rifkinite might argue. It is, rather, frightening in its promise to further increase the power and hegemony of today's reductionist medical establishment. And this is true despite the fact that real improvements in therapy and healing, as well as some amazing science, can be expected to flow from it.

**TWENTY-FIRST CENTURY
LUDDISM**

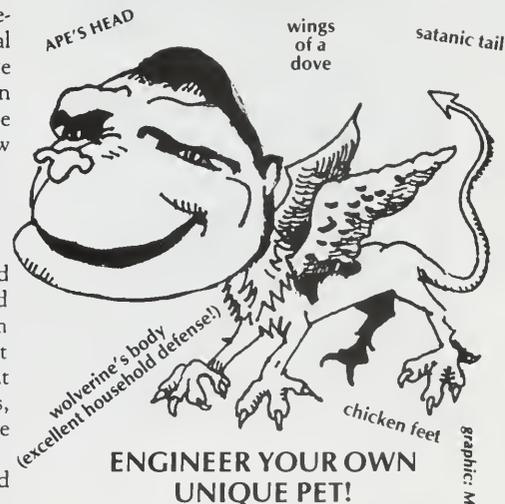
The original Luddites were skilled artisans who smashed the automated looms of the encroaching factory system — not because they hated machines, but because they knew no better way to fight for their way of life. They were heroes, but the day was not theirs. They were destroyed.

It is a lesson today's Luddites should

learn, and as soon as possible. The passions that fuel refusal are one thing, but the conclusion that refusal — of compromise, complexity or technology — is the only basis for radicalism is quite another. There is no future in a politics defined by the rejection of advanced technology. If simple living is the only way, then there is no hope at all. The really radical Luddism knows this, and sees the tragedies of our time as results not of "technology over the invisible line" but of the social institutions that shape both our lives *and* our machines. A truly radical technopolitics would quickly put "technology" aside in favor of more immediate social notions like "capitalism" and "democracy." What is needed is a democracy deep enough to function even at the level at which the machines are shaped—from the uses to which those machines are applied to their design and construction and use, all the way down the pipeline.

The questions are legion. Why does technology always seem to betray its promise? Why are alternate paths so often ignored? Who, to ask the primal political question, decides? These are the questions that define a truly radical Luddism. Who decides that agricultural biotech research will focus on the development of herbicide-resistant crops? Who decides that autos are to be the backbone of the U.S. transportation system? Who decides if RU-486, the French "abortion pill," is to be banned? Who decides that nuclear energy is the best answer to greenhouse warming? These are specific questions, and they yield specific answers — the best kind.

—Tom Athanasiou



graphics: M.C.B.

GENERATION X (cerpt)

I AM NOT A TARGET MARKET

People are wary of Dag when meeting him for the first time, in the same visceral way prairie folk are wary of the flavor of seawater when tasting it for the first time at an ocean beach. "He has eyebrows," says Claire when describing him on the phone to one of her many sisters.

Dag used to work in advertising (marketing, actually) and came to California from Toronto, Canada, a city that when I once visited gave the efficient, ordered feel of the Yellow Pages sprung to life in three dimensions, peppered with trees and veined with cold water.

"I don't think I was a likable guy. I was actually one of those putzes you see driving a sports car down to the financial district every morning with the roof down and a baseball cap on his head, cocksure and pleased with how frisky and *complete* he looks. I was both thrilled and flattered and achieved no small thrill of power to think that most manufacturers of life-style accessories in the Western world considered me their most desirable target market. But at the slightest provocation I'd have been willing to apologize for my working life—how I work from eight till five in front of a sperm-dissolving VDT, performing abstract tasks that indirectly enslave the Third World. But then, hey! Come five o'clock, I'd go nuts! I'd streak my hair and drink beer brewed in Kenya. I'd wear bow ties and listen to *alternative* rock and slum in the arty part of town."

Anyhow, the story of why Dag came to Palm Springs runs through my brain at the moment, so I will continue here with a reconstruction built of Dag's own words, gleaned over the past year of slow nights tending bar. I begin at the point where he once told me how he was at work and suffering from a case of "Sick Building Syndrome," saying, "The windows in the office building where I worked didn't open that morning, and I was sitting in my cubicle, affectionately named the veal-fattening pen. I was getting sicker and more headache by the minute as the airborne stew of office toxins and viruses recirculated — around and around — in the fans.

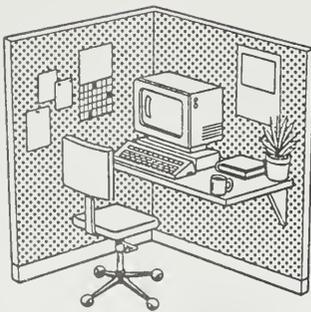
"Of course these poison winds were eddying in my area in particular, aided

by the hum of the white noise machine and the glow of the VDT screens. I wasn't getting much done, and was staring at my IBM clone surrounded by a sea of Post-it Notes, rock band posters ripped off of construction site hoarding boards, and a small sepia photo of a wooden whaling ship, crushed in the Antarctic ice, that I once found in an old *National Geographic*. I had placed this photo behind a little gold frame I bought in Chinatown. I would stare at this picture constantly, never quite able to imagine the cold, lonely despair that people who are genuinely trapped must feel—in the process think better of my own plight in life.

"I just don't understand you young people. No workplace is ever okay enough. And you mope and complain about how uncreative your jobs are . . ."

"Anyhow, I wasn't going to produce much, and to be honest, I had decided that morning that it was very hard to see myself doing the same job two years down the road. The thought of it was laughable; *depressing*. So I was being a bit more lax than normal in my behavior. It felt nice. It was pre-quitting elation. I've had it a few times now.

"Karen and Jamie, the VDT Vixens who worked in the veal-fattening pens next to me (we called our area the junior stockyard or the junior ghetto, alternately) weren't feeling well or producing much, either. As I remember, Karen was spooked about the Sick Building business more than any of us. She had her



VEAL-FATTENING PEN:

Small, cramped office workstations built of fabric-covered disassemblable wall partitions and inhabited by junior staff members. Named after the small preslaughter cubicles used by the cattle industry.

sister, who worked as an X-ray technician in Montreal, give her a lead apron, which she wore to protect her ovaries when she was doing her keyboarding work. She was going to quit soon to pick up work as a temp: 'More freedom that way—easier to date the bicycle couriers.'

"Anyway, I remember I was working on a hamburger franchise campaign, the big goal of which, according to my embittered ex-hippie boss, Martin, was to 'get the little monsters so excited about eating a burger that they want to vomit with excitement.' Martin was a forty-year-old man saying this. Doubts I'd been having about my work for months were weighing on my mind.

"As luck would have it, that was the morning the public health inspector came around in response to a phone call I'd made earlier that week, questioning the quality of the working environment.

"Martin was horrified that an employee had called the inspectors, and I mean *really* freaked out. In Toronto they can force you to make architectural changes, and alterations are ferociously expensive—fresh air ducts and the like—and health of the office workers be damned, cash signs were dingy up in Martin's eyes, tens of thousands of dollars' worth. He called me into his office and started screaming at me, his teeny-weeny salt and pepper ponytail bobbing up and down, 'I just don't understand you young people. No workplace is ever okay enough. And you mope and complain about how uncreative your jobs are and how you're getting nowhere, and so when we finally give you a promotion you leave and go pick grapes in Queensland or some other such nonsense.'

"Now, Martin, like most embittered ex-hippies, is a yuppie, and I have no idea how you're supposed to relate to those people. And before you start getting shrill and saying yuppies don't exist, let's just face facts: they *do*. Dickoids like Martin who snap like wolverines on speed when they can't have a restaurant's window seat in the non-smoking section with cloth napkins. Androids who never get jokes and who have something scared and mean at the core of their existence, like an underfed Chihuahua baring its teeny fangs and waiting to have its face kicked in or like a glass of milk sloshed on top of the violet filaments of a bug-barbecue: a weird abuse of nature. Yuppies never gamble, they calculate. They have no aura: ever been to a yuppie party? It's like being in

an empty room: empty hologram people walking around peeking at themselves in mirrors and surreptitiously misting their tonsils with Binaca spray, just in case they have to kiss another ghost like themselves. There's just nothing *there*..

"So, 'Hey Martin,' I asked when I go to his office, a plus James Bond number overlooking the downtown core—he's sitting there wearing a computer-generated purple sweater from Korea—a shirt with lots of texture. Martin likes texture. 'Put yourself in my shoes. Do you *really* think we enjoy having to work in that toxic waste dump in there?'

"Uncontrollable urges were overtaking me.

"...and then have to watch you chat with your yuppie buddies about your gut-liposuction all day while you secrete artificially sweetened royal jelly here in Xanadu?"

"Suddenly I was into this *très* deeply. Well, if I'm going to quit anyway, might as well get a thing or two off my chest.

"I beg your pardon,' says Martin, the wind taken out of his sails.

"Or for that matter, do you really think we enjoy hearing about your brand new million-dollar home when we can barely afford to eat Kraft Dinner sandwiches in our own grimy little shoe boxes and we're pushing *thirty*? A home you won in a genetic lottery, I might add, sheerly by dint of your having been born at the right time in history? You'd last about ten minutes if you were my age these days, Martin. And I have to endure pinheads like you rusting above me for the rest of my life, always grabbing the best piece of cake first and then putting a barbed-wire fence around the rest. You really make me sick.'

"Unfortunately the phone rang then, so I missed what would have undoubtedly been a feeble retort... some higher-up Martin was in the middle of a bum-kissing campaign with and who couldn't be shaken off the line. I dawdled off into the staff cafeteria. There, a salesman from the copy machine company was pouring a styrofoam cup full of scalding hot coffee into the soil around a ficus tree which really hadn't even recovered yet from having been fed cocktails and cigarette butts from the Christmas party. It was pissing rain outside, and the water was drizzling down the windows, but inside the air was as dry as the Sahara from being recirculated. The staff were all bitching about commuting time and making AIDS jokes, labeling the office's fashion

victims, sneezing, discussing their horoscopes, planning their time-share in Santo Domingo, and slugging the rich and famous. I felt cynical, and the room matched my mood. At the coffee machine next to the sink, I grabbed a cup, while Margaret, who worked at the other end of the office, was waiting for her herbal tea to steep and informing me of the ramifications of my letting off steam a few minutes earlier.

"What did you just say to Martin, Dag?" she says to me. 'He's just having kittens in his office—cursing your name up and down. Did the health inspector declare this place a Bhopal or something?'"

— © 1991 Douglas Coupland

Thanks to Doug and St. Martin's Press for permission to print this excerpt from the 1991 book GENERATION X. See the review on page 53.

EMOTIONAL KETCHUP

BURST: The bottling up of opinions and emotions inside oneself so that they explosively burst forth all at once, shocking and confusing employers and friends—most of whom thought things were fine.

BLEEDING PONYTAIL:

An elderly sold-out baby boomer who pines for hippie or pre-sellout days.

BOOMER ENVY: Envy of material wealth and long-range material security accrued by older members of the baby boom generation by virtue of fortunate births.

CLIQUE MAINTENANCE:

The need of one generation to see the generation following it as deficient so as to bolster its own collective ego: "*Kids today do nothing. They're so apathetic. We used to go out and protest. All they do is shop and complain.*"

CONSENSUS

TERRORISM: The process that decides in-office attitudes and behavior.

GENETIC ENGINEERING PIONEER

PW: You were born in Brazil and went to Switzerland in 1964, when you were 16. How old were you when you got interested in genetics?

MARCO SCHWARZSTEIN: Somehow, I was never interested in genetics [laughs]. I always wondered what natural science was about, because I was more motivated by social science or something like that. But it was like a black spot, I couldn't understand how they could draw conclusions. . . . that they could pretend to be telling How Things Are.

After the '68 movement there came quite a depression among militants. We didn't know what we were going to do. I had this kind of nervous breakdown. After one and a half years, I could finally walk and talk again. To help my recovery, I decided on a lark to begin studying biochemistry because it had something to do with life, and I was fascinated with this double helix, this DNA. That was my main motivation.

I studied in Zurich. Around 1974 or '75 the first primitive genetic engineering work was being done. It was a good moment because genetic engineering breakthroughs were really beginning. When I was finishing my studies in 1979, the major breakthrough was coming. Small biotech companies began to develop.

At that time this discussion was going on about ethical issues, which was quite exceptional. A lot of people were afraid of what they were doing. With time they became less afraid. At the [1975] Asilomar conference there was some concern that these experiments could be dangerous. What would happen with these new bacteria that would have this new genetic information in them? They were using what they called "disabled" bacteria, but *E. coli* bacteria live in human intestines, so there was concern. Some scientists were warning people, but having been there at the time, I realize that this concern just diminished. It seems that nothing very serious ever happened, no accident, not yet, so ethical discussions almost disappeared.

PW: Were you motivated by desires to improve humanity?

MS: No, not at all! I've always mistrusted this thing; I never had the feeling that science would solve any kind of problems. On the contrary—I always had the feeling that it was *creating* a lot of problems. Scientific ideology never impressed me a lot.

The work itself is quite fascinating. In genetic engineering there is strong pressure to get results, and molecular biology



It sounds fine doing research for a third world country. But you are fighting against the whole structure of these state companies, which are research companies but also political entities.



gives you results. Everyday I would get some small results. The experiments run relatively quickly. The whole project can go on for years, but everyday you can reach a milestone.

At the University I went for a Master's Degree. I learned DNA sequencing. It's just a technique. Nowadays they have machines to do that, but at that time you had to do it manually. It was fascinating just to be able to read this thing with very small amounts of material. What I didn't like very much was working with radioactivity. I had some luck because the lab I was in won this race to produce interferon through

cloning. It was 1980 and there were some big labs trying to be the first. . . .

PW: Were you getting money from pharmaceutical companies?

MS: Biogene, where I worked, was basically a university lab moved off campus. We had some investment from Roche, and we were competing with Genentech to clone interferon first. That began the entrance of biotech capital into the university labs. And when they got the clone, they needed to sequence it very quickly, and I was the one person there who could do it. That's when I began to be paid by Biogene. It was very interesting to see how things were organized and how they began to use our work for propaganda, for raising the image of this biotech company. Interferon was presented as a cure for cancer, for everything. It's strange because I was always saying that this stuff wouldn't work, it would be no good at all. [laughs].

I was deeply mistrustful about these supposed "marvelous results," which turned out to be true and false. It's not a special breakthrough, it's a drug like any other. But if I get cancer, I'm gonna have to buy it, which bothers me.

PW: That's the perfect picture: invent something in your youth that saves you in old age!

MS: Yes, after working in the lab with radioactivity, I have a good chance!

Before I left Europe in 1984 I did some stints at a European plant's molecular biology labs, where I was again witness to a major breakthrough. This was the first time they introduced a foreign gene into a plant, which then expressed it. That was in Belgium. I arrived 4 months after that happened, and it was still going on.

Anyway, I wanted to go back to Brazil. I heard about a Swiss guy who was opening a molecular biology lab there. It was a way of going back and having a salary. I knew I would need some time to get adapted again. I worked about five years in this lab. That was quite a



Marco Schwarzstein (2nd from right) celebrating the first isolation of interferon with his lab mates (photo from LIFE magazine, May 1980, vol. 3 #5).

difficult and frustrating experience, both for the [scientific] results, but also on a personal level. Not because I couldn't adapt to Brazil, but I couldn't adapt very well to the conditions under which they work, which are quite difficult. You don't have [chemical] reagents, you have to fight bureaucracy, you have to be a good politician. You are surrounded by people who know very little.

It's very important to be hopeful in this business, especially in Brazil. You really have to be a believer. You are playing against all odds, but that doesn't matter. They believe in miracles. To be a scientist in Brazil you have to be quite idealistic. I have some friends who try and fight but it's very harsh. If you are trying to keep pace with the latest developments in, let's say, gene technology, it's almost impossible. At the same time one has to do that — you get money for that, you get sustained by that. I worked at a Brazilian state research company.

PW: That was EMBRAPA?

MS: Yes, the agricultural ministry. Somebody in the bureaucracy made the decision to open a biotech lab. We had this funny, strange project which was to put the gene from the Brazil nut, which is very rich in sulfur, into Brazilian beans. We were in competition with an American company that was also trying to isolate this Brazil nut gene. It was as difficult for them as it was for us.

PW: They want to get sulfur into the bean? Why?

MS: Because it is an amino acid which is "missing." What's wrong with the bean not having sulfur? [laughs] It's a strange story because I never heard of a sulfur-deficiency illness. Nobody is getting ill because they are not getting enough sulfur. I thought it was a good idea, because you got money for doing it, and a lab, and you got to put a team

together. It sounded reasonable that in a third world country like Brazil we *should* have people working in molecular biology. After all, Brazil is going to be a big market for these products. So if nobody understands this shit, people are going to spend money on the wrong things.

For example, in the construction of this lab a lot of mistakes were made. Somebody gets one or two million dollars to buy machines, like an amino acid analyzer or a protein sequencing machine, and then Beckman, say, sells machines which are impossible to use. They sell them for 60-70,000 bucks, machines which are already almost obsolete in the U.S. We got two or three white elephants there that no one can use. The incompetence of the people who chose the machines and the bad faith by Beckman reinforced each other. Beckman didn't help at all with the problems that arose with their machines. This happens all the time.

There are machines which require lots of expensive chemicals, and you can't get the chemicals. Without technical support you are fucked up. They had a guy there who tried hard, but it never worked and it was very frustrating. It seems that that's the way one must learn. You have to spend lots of money on the wrong things to learn how not to do it, but then how do you break this dynamic?

We made a deal with this Belgian company. It was a three year contract which cost our Brazilian company about one million dollars. To get reagents we had to spend much more than they cost. It was a very expensive trick to avoid the import bureaucracy.

It sounds fine doing research for a third world country, fighting to keep up. But you are fighting against the whole structure of these state companies. They are run politically. They are research companies but they are also political

entities. That's the problem! They are not profit-oriented. Their orientation is just to survive to keep power. Now they're just living on taxes. EMBRAPA is very prestigious in Brazil. It's known for success in agricultural research. I doubt that they've really been so successful since they've mostly been supporting big monoculture techniques. There are always some islands, some guys working on alternative techniques, but the main thing is monoculture: corn, soya, oranges, sugar. They are fantastic on public relations, so they've convinced me they're really great! [laughs]

When the economic crisis came they began to cut expenses and personnel costs, so my salary went down to a third of what it started at. It was absolutely ridiculous to go on working like that. Because of this high inflation rate, if salaries are not readjusted at least every three months, you lose. So I wasn't getting readjusted, and neither were a lot of people in EMBRAPA. During the last two years I wasn't showing up very often.

PW: Did your research just die out?

MS: We did have some success. We did the work down there and the results were published by the Belgian company, although the American company almost published first. It's very difficult to transform beans [genetically]. So the problem was not getting the gene (that took about four or five years) but in transforming beans with that gene. We could put it in tobacco, but no one is going to eat tobacco!

—interview by Chris Carlsson

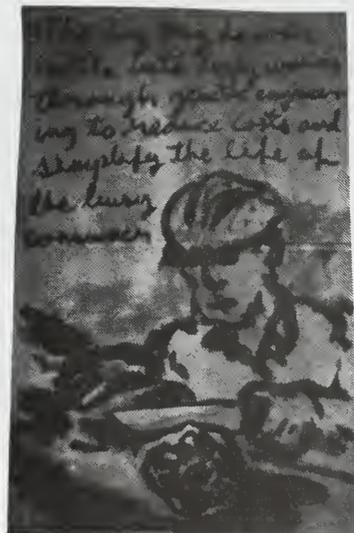


photo: D.S. Black Soho, NYC, June 1991

BAR RAPS

“Are you waiting for me to tell you to sit down?” The shades shadow lines against her forearm. Moon must be nearing fullness. “You’re still standing?”

The man breathes deeply in, loudly out. His breath rises above and over the air between his soles and the barstool. He could take off at this second, take off back over the boats along the marina behind the restaurant. He could start flapping his arms with that breath and sail even further. But he doesn’t. He stiffens. His eyes are tired and brown.

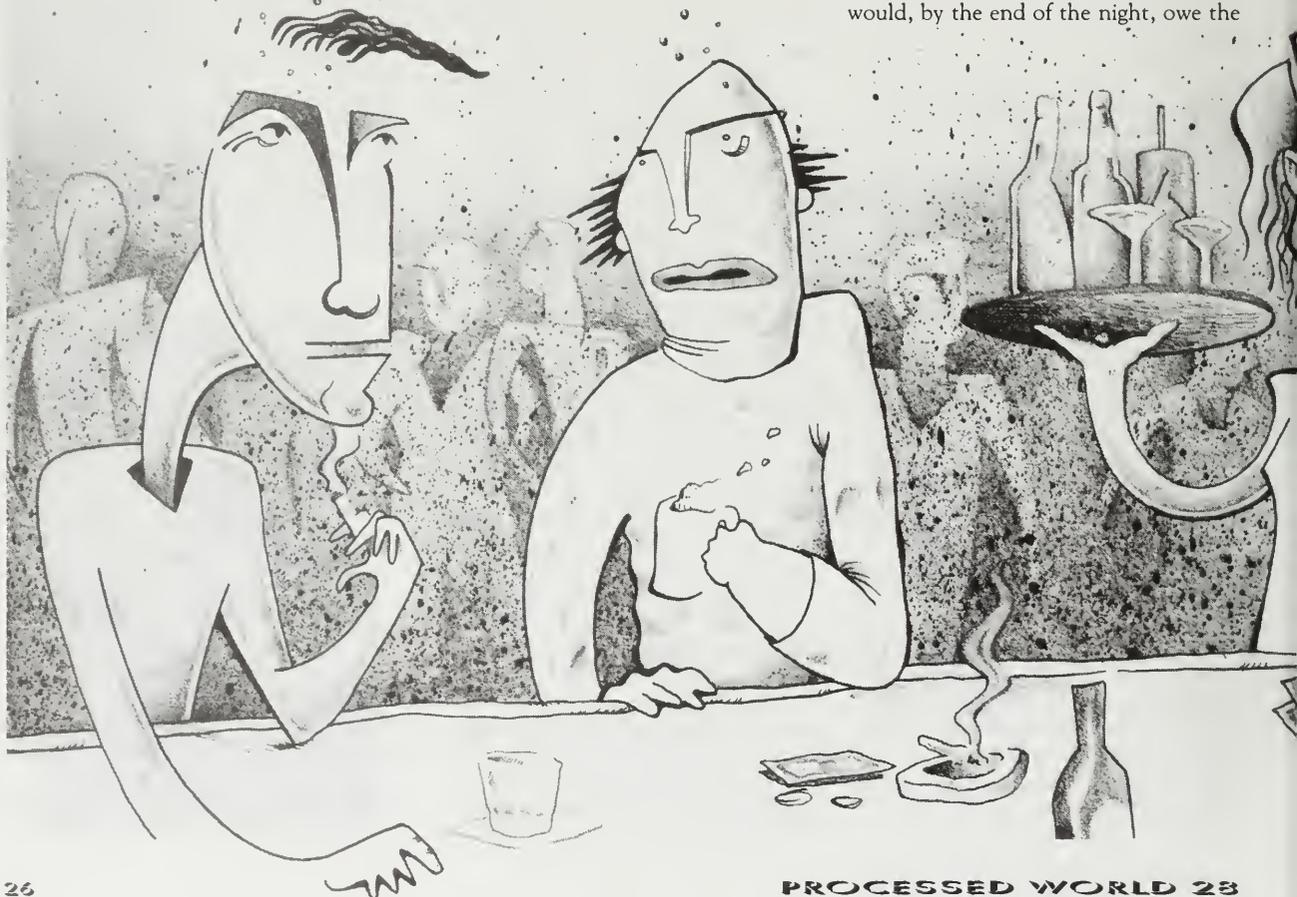
He tells us about the dream: elms topped with copper hair like seahorses. In the background are mills. Puffed from a millstack are slow dancers bending ashly arms out of sooty silk veils. “They were beautiful,” he confesses. “Their arms were open, aching.” “You don’t like that they seemed beautiful?” I ask. “No! Not the elms, the dancer’s arms!” “Oh!” we sigh, pretending to follow his story. He thinks we lose control so he turns from us, bends to tie a shoe, looks back so far his eyes cross. “I have to go now,” he says. “I’m late for work.” His barnap wraps the last moist chill of the mug in indentations his fingersize, cradling the oblong glass, slobbery, slipping from its side.

When the window cleaner raises his arm to scrape the top layer of dust, his forearm rubs against the glass. In this bar, there are nothing but windows and men with beige suits holding on for dear life.

You pour and a voice comes from the bottle, impersonal and predictably sweet. “What can I get for you? What can I do?” And you say to the voice, obviously you: “I don’t think I want to hear this.” There’s a distant click of glasses. The voice says: “There will be a toast in your honor and tips for you and smiles through and through.” And you say Yes and turn your back away because you want to sleep. The waves of a liped voice reaches across to you: “I’m sure you’ve heard this all before.”

On mornings the rain came and stayed for four days, the kitchen floor filled up with food resin from the walk-in box where the drain would overflow and lose control. We’d place large mayonnaise buckets in various places where we thought the leaks were. It never worked. We spent more time pushing around buckets until our knees were stained from crouching down to scoop up slime. When the rain came, we knew one of us would, by the end of the night, owe the

GRAPHIC BY JRS



Reprimand Jar some quarters. Each check on the Reprimand Sheet was worth a quarter. It was important to keep us all on top of our employment duties: proper dress, proper conduct, proper use of time. At the end of a month, the money would go to a staff party, and the employee who paid out the most received a series of warnings eventually leading to his/her dismissal. This meant that every time someone got fired, we had a party. On days the rain comes, the bar fills up by noon. As the others prepare the buckets, I make extra Bloody Mary mix with handfuls of celery salt and thyme. Worcestershire separates to the jug's top layer and twirls into brown spirals before anyone even orders any.

By the end of the day, we throw buckets of water on the bar floor to loosen tomato juice from down under cracks.

"Ship's in tomorrow, girls!" The manager calls the staff the night before any ship is due to dock after months in the middle of an ocean. We know then not to wear short skirts unless we're desperate for money. Once, Sue thought she'd fake them out and wore her husband's

painting overalls, a spotted white jumpsuit with slabs of paint dripped unevenly down the front, baggy and stretched just above the back of her knees. It didn't work. The boys thought it was cute. Thought she was sexy, trying to relate to them somehow. She made \$175 by midnight. Her shift starts at eight.

One part gin. One part a mixture of dark, light, and spiced rum. One part pineapple. One part soda water. A dash of creme de menthe. A dash of creme de cacao. Mix vigorously. Strain. Top with 151. Garnish with cherry and orange slice.

"Anything in a green bottle. I don't care what it is. Just anything in a green bottle. And nothing foreign. Got it straight? Nothing foreign."

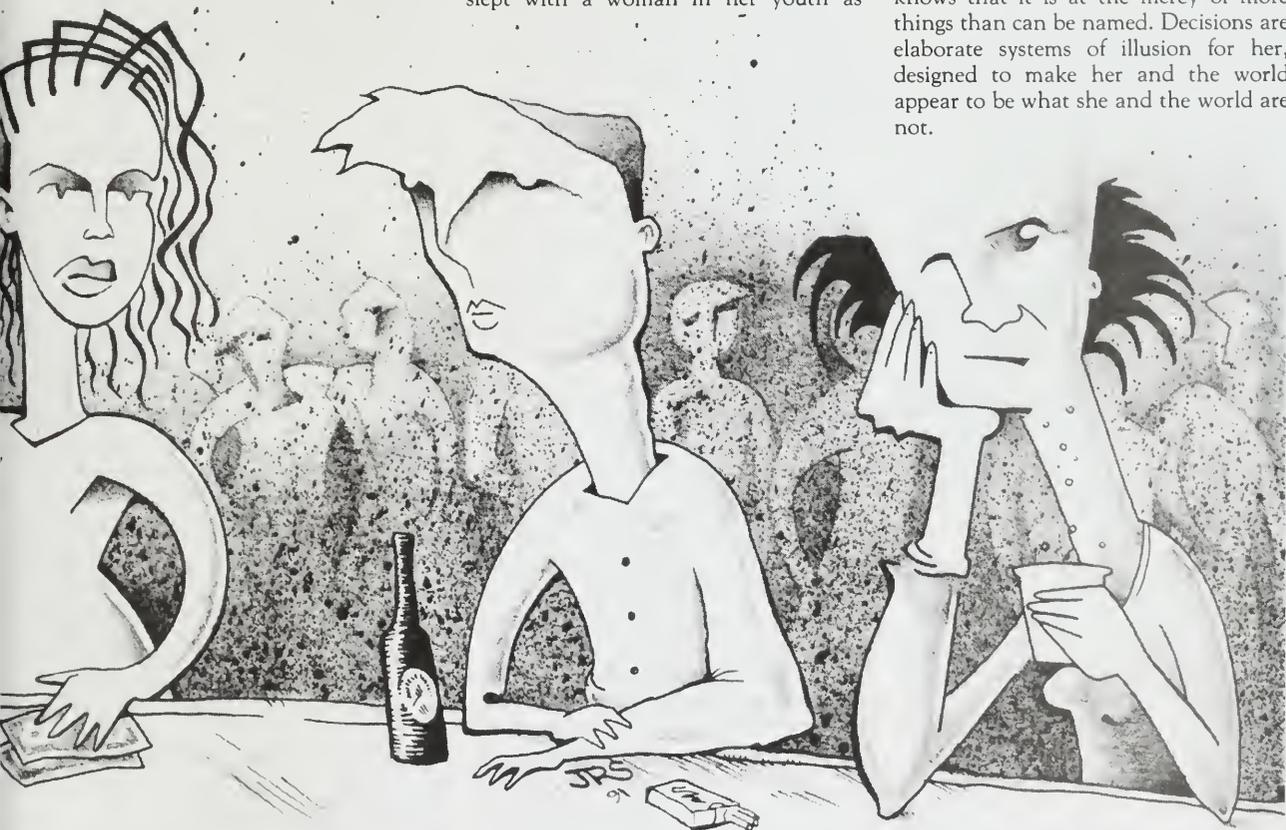
Mary likes her Bloodys spicy so her tongue and inner cheeks numb. Saves the thin red cocktail straw for trips to the bathroom. She ages rapidly. The lack of sleep and cigarettes are making marks around her face. Faint lines aim to create ovals that begin from her nostrils veering down over each side of her mouth. She's got secrets, she tells the others at the bar, then says once she slept with a woman in her youth as

though she robbed a bank and threw the money in the bay. She goes to the bathroom every twenty minutes or so. Her drink dilutes, grows pink. She returns and orders another, fresh.

When the band's on break, they bring the bartenders to the walk-in and cut out three lines for each. They share a few beers, then mark them as comps on the nightly inventory sheet. They check each other's noses as they return with six-packs to stock the cooler for the rest of the night. From there on, the clock moves.

The Last Call Bell was brass and two and a half feet tall. It hung, always, above my left-side head, near the cash register and variously-flavored schnapps.

She's one of those people who pride themselves on their ability to make a decision and carry it out. This virtue, like most virtues, is ambiguity itself. People who believe that they are strong-willed and the masters of their destiny can only continue to believe this by becoming specialists in self-deception. Their decisions aren't really decisions. A real decision makes one humble, one knows that it is at the mercy of more things than can be named. Decisions are elaborate systems of illusion for her, designed to make her and the world appear to be what she and the world are not.



He was an old man who drank Stoli straight up, chilled, with a twist of lemon. He was born with only thumbs and small nubs of bone where the fingers were supposed to be; his hands were like tiny tree stumps. His lips were dry and cankered, his eyes blue and green with brown-tan outlines. His elephant ears which rubbed up against wrestling mats in his youth, now protruded in her peripheral view. He watches her mix his order. Watches her arm arch bottle over tumbler with ice as he stares at her as though sketching her portrait. She strains the chilled brew into a rocks glass and rubs a lemon rind around the lips before dropping it into the liquid. He rarely talks except to order, explain his ears, or tell how to mix the martini. Watching her hands and fingers master the tilt of the tumbler and the twist of the rind, he pays her with a fifty for four, leaving always the same tip: more with the ice, and less with the hands.

Sully says not to look for anything profound in my daily explorations through mixology. He reaches into his back pocket, pulls up a tiny rubber ball, and begins to squeeze it. "It's like money. You can't think about it too much. It can't control you, or it loses all power to benefit you." He asks me to smile as he stands to leave. I smile. He places a fifty beneath his barnap, smiles back, turns, then leaves.

"Always pay attention to the same sex customer when waiting on a couple. If you're a woman, talk with the woman, and a waiter should address the man. Never give the partner reason for jealousy. Get her/him on your side so she/he persuades their partner to tip you nicely." "A nice tip is one which demonstrates to the waitperson that she/he has demonstrated to the customer(s) that their demonstration of service satisfied their palates, their stomachs, and their overall idea of human interaction."

Each time he sat at the bar, he asked when I would settle down. "Why hasn't a girl like you become hitched yet? When ya gonna settle down?" And whenever he said that I saw the sediment at the bottom of a stagnant pond. Every time he asked, I had the feeling that he and his buddies were taking bets on me. They were like priests of a strange holy order, watching me to discover by means of gestures I made (which only they could read) whether or not I had a true vocation.

WORK NIGHTMARE #86: One night I dream the bottles are not just covered in dust, but full of black soot caused by the railroad workers from the night shift. I dream they each carry in their lung, and place it on the bar like a lover or drinking pal. They dust them off between sips. I'm confused. I don't know who to pay attention to this time. After a few rounds of bourbon and sevens and Coors Lites, they grow attractive. I take one home with me. His eyes are blue like creeks covered over by dry branches. He brings his lung, black and rough with calloused entrails. He places it on the night stand next to us. I don't come for him—instead vomit. It's what he wants me to do. He falls asleep. I patient the night for sunrise with wide eyes while the lung breathes mucused dreams in my right ear.

To hold small objects in the palm of the hand, glass, delicate objects, to break and listen. Sharp notes, angelic and high as if the greens of the leaves soar toward the sky in an effort for redness.

I drop glasses easily. They demand drinks so quickly I can't concentrate on the money flow, so I concentrate on the demand. My hips can't move to the music anymore. I just move automatically, until I rinse some glasses and hang them above my head in haste. They collide together, they shake then break over a row of heads. No one is hurt. \$85 is taken from my pay for a case of glasses. My tips decrease for two weeks until the regulars realize I don't shatter glass on purpose.

Now it's time to move, I think, and I move. I'm being paid for this. They've raised me to crave such redundancy.

Such are my bodily needs: each thought goes into my clothes. My sixth pair of black pants are ironed, the white button down shirt cleansed of ketchup stains. Everything goes into my clothes although it isn't noticeable to others. I could be fired for not getting out that stain from the ninth white shirt in my wooden closet. They could fire me for not standing over my sink all day rubbing the stain from the cloth. They could fire me if they read my thoughts as my hands go up and down over the spot until only a faint outline of pale pink is visible up close. I have thoughts of pushing the clock forward, and I do, push the clock forward, but still last call rarely comes soon enough. They could fire me if they knew I was thinking off the job.

I'm too serious and not serious enough to take this seriousness seriously enough.

He doesn't like me, that new manager. Thinks I laugh too much.

Sully says you can't take them all so seriously. He reaches into his side pocket and brings up a sack of tobacco, rolls a cigarette, bites the end, and lights it. "It's like sex, ya know. You can't think about it too much, it can't be regulated, or it loses all power to dissolve your being into complete breakdown and orgasm."

Mash cherry with sugar in rocks glass. Add ice. In separate tumbler, mix scotch and sweet vermouth. Shake. Drain contents over ice with cherry and sugar. Garnish with orange or lime and cherry with toothpick.

We are as the next person to leave us. A religion that allows us only sense enough to understand the last word in any conversation. Is there some glory in adapting the brain to a national idiocy: to replace the eyes with masks? To paint on smiles or expressions of interest? But when one isn't looking for glory in life can the face easily be splashed with cool water? (Too many questions, girl, too many questions. Just smile. I am smiling, on the inside. Just drink your beer, man, and mind your own business. Can't you see I'm thinking?)

The color of my hair as I ring the black out to go white. Here, I float along in moods behind bars, back there where my legs don't matter, where my arms perform mimical utterances of stifled thought. Where the smoke comforts corners. Where the mirrors behind me reflect no one but myself, and when I take second looks, I'm gone. It is landscape lacking here. Depth and the open security of nothingness, and everything's in front of me, constantly. But eyes themselves do something different. They ask for pleasing things inside the bottle, inside the habitual faces. They can't detect the life.

To the beauty of the drunk at my feet; to the cry of the cat at my feet as I walk on top of him. (What are we toasting to now? To anything, girl. Just keep toasting.) To shy and strong friends. To three more hours in a day. To the imagination. To the cry of the tires sound and the word we give to rubber, outside the valley where the Mack trucks strut from lane to lane. To the CB vocals adrift above the car roof out over the highway. Come in Big Buddy. Come in Big Buddy. Come in. 10-4. We need another language. I need a new job.

—Marina Lazzara

PEOPLE'S AMBULANCE CHASER

The ad offered a job as an entry-level paralegal starting at \$7.50 an hour for a “P.I.” I immediately began imagining myself accepting the low wage in exchange for being able to perform socially beneficial work. Then, too, I desperately needed some income, having recently returned from a mandatory vacation in the Los Angeles County Jail only to go through two months of near homelessness. But I soon learned that “P.I.” stood for personal injury—a practice quite antagonistic to my notion of the public interest.

Once the boss, James M. Rogers, Esq., reviewed my answers to some sample questions for the LSAT test and decided to hire me on the spot, and once I had calculated that the pay was barely adequate for food and shelter in the rat-infested warehouse I called home, there was no looking back.

It was not what I expected from a job in the legal profession. During the interview Jim went over an employment agreement that detailed the paralegal compensation system he hoped to implement. I could tell from the contract that “pay-per-client” was an incredibly complicated piecework system incomprehensible to anyone without considerable experience working in Jim’s office. Jim admitted that his paralegals had reservations about the plan, and he invited me to hear their side before accepting the position.

I was introduced to Phyllis, a fairly senior paralegal, who cornered me at the first possible moment with a blunt “Don’t sign it.” But because I needed money badly, I agreed to accept the position provisionally for \$7.50 an hour (out of which I was required to pay \$100 per month for health insurance) until I became familiar enough with my job to understand the new system.

I started work the next morning, meeting Kelli, my supervisor, and shortly thereafter, Aryah, the president of the firm’s new paralegal union. This astonishing revelation immediately signaled something was amiss in paradise: paralegals are generally a fairly well-paid and

respected group whose loyalty and diligence are ensured by good pay, benefits, advancement, and prestige. But here they had chosen to band together like coal miners.

Equally striking was having to punch a time clock, something I had never even heard of in a world where disciplined attendance is presumed to follow from the sheer pleasure of working in such a genteel and rarefied atmosphere.



Jim seemed reluctant to represent minors, because his fees were limited to 25 percent by law, and because minors usually healed quickly and without the orthopedic complications that justify prolonged, expensive treatments.



Despite nagging reservations fueled by the continuous griping of my new co-workers and Aryah (“After taxes your pay comes to \$900 a month. Can you live on that?”), I plunged into my job with the help of a xeroxed manual and a few dozen case files Jim handed me. To my surprise, there was virtually no training. Suddenly I was responsible for handling forty or fifty personal injury

lawsuits. I didn’t panic, for I had learned that nothing happens very quickly in the law, but I was bewildered about where to start.

My supervisor flagged the case folders that needed prompt attention, but didn’t mention that these instructions were for me rather than my predecessor. So I engrossed myself in absorbing some of the seventy-plus single-spaced pages in the manual. Fortunately, if you ignore personal injury cases long enough, someone will get in touch with you and clue you in on how to proceed, particularly the clients, who are endlessly curious and impatient for settlement money.

As I learned more about the incredibly complicated and stressful task I had assumed, I also got an education in the incredible insensitivity and avarice underlying a business that converts people’s misfortune, ignorance, and helplessness into easy and plentiful cash.

Mr. Rogers’ firm advertises extensively as the “People’s Lawyer,” generating a large volume of clients. A people’s paralegal conducts an initial interview over the phone to get the basic facts of the case, which boil down to whether the law firm can easily settle it for substantial money. The contingency fee requested is based on the effort required to bring the defendant’s insurer to settlement: 33% for the easiest cases, 45% for those requiring arbitration, a fast, out-of-court forum mutually agreed upon by the parties to avoid a trial’s expense. Then Jim is notified so he can track who’s working on what for how much.

Problem cases are invariably turned down. Tough questions of liability, no insurance coverage, or a potential settlement too small to bother with are all disqualifications. Any case requiring an actual jury trial is rejected by policy. If insurance “burns out” or the client doesn’t generate enough in medical bills, the case is “dumped” as soon as possible to avoid further expense and hassle. The

result is that the law firm never takes any case that doesn't practically guarantee a high return.

This pursuit of sure pay-off leads to some embarrassing moments for the conscientious, who must inform clients that the People's Lawyer doesn't help uninsured people hit by uninsured drivers or people pitting their word against that of the wealthy or powerful.

I received one call from a young black woman, who, along with her sister and infant daughter, was injured when a speeding Oakland Police car in hot pursuit of a suspect hit their car. The woman had changed lanes to allow one police car to pass when a second police car came speeding around a corner and struck her car from behind. A poor underdog wronged by the careless power of the arrogant state—and the police so obviously at fault! I could barely contain my excitement. But when I shared my good fortune with Jim, he was very

concerned that the potential client lacked insurance and felt that the police would fabricate their report to exculpate themselves. He refused to let me send the woman a contract until we reviewed the police report. I sent the woman an authorization form for the report, but she never sent it back, so the file languished.

Months later, Jim wrote a note on the case folder asking why the contract hadn't been sent. I attributed his poor memory to indifference to the people involved in his cases beyond their potential to generate a fee.

Reinforcing this suspicion, Jim seemed reluctant to represent minors, because his fees for taking their cases were limited to 25% by law, and because minors usually healed quickly and without the orthopedic complications that justify prolonged, expensive treatments.

Once another woman called regarding her mother and daughter, who had both

been struck by a car while crossing the street in front of City Hall. Jim wanted to take the grandma's case but not the kid's. I was expected to explain to this woman that her parent had a good case but her child didn't, although they were both injured at the same time in the same place in the same manner. Fortunately, the woman never called back.

Despite Jim's reluctance to send contracts to the poor, oppressed, and uninsured, he did put a number of doctors and chiropractors under contract to treat clients at no charge until the settlement came through. It was a mutually beneficial arrangement, guaranteeing them a steady stream of patients and helping us make good cases.

Jim also arranged for reduction of clients' bills in case a settlement was smaller than expected, "so the client could at least recover something." Instead, this fee reduction was used to recover attorneys' fees (usually one-



graphic: Joan



Processed World's Attitude Adjustment Seminar, August 31, 1991
held at Klub Komotion, San Francisco

third) from medical insurance settlements.

Such "med pay" comes from the client's own insurance company, and is intended to cover the client's medical expenses for the accident regardless of liability. It is usually paid promptly upon documentation. True to its name, med pay is expected to cover doctors' bills, while payment of the claim against the person liable for the accident usually takes care of the lawyers' bills.

But I once found myself trying to get a doctor to take a 50% cut so Jim could collect one-third of a med pay check (some \$1,100 or so) already promised to the client to pay still more medical bills. The doctor couldn't understand why the client needed more money, since the poor unfortunate had just won a \$10,500 liability settlement (and the law firm had already pocketed a third of it). Jim had me dickering so the firm could get paid twice. Jim's policy put especially heavy emphasis on med pay. Eventually the doctor read between the lines and had to swallow Jim's cupidity or lose future clients.

Once a client dropped us after I had helped him get \$8,700 in property damages by browbeating the insurance adjuster. This money couldn't even generate fees for us, since the client settled his

own property damage claim (according to the firm's policy), although I had to pave the way by out-arguing the adjuster first. I therefore expected the client's gratitude.

However, when I called the client to initiate a med pay claim from his auto insurance, he told me he hadn't filed an accident claim with his carrier and didn't want to because he was afraid of higher premiums.

I was at a loss for words and told him I'd get back to him. I found out later that the manual instructs us to reassure the client that Proposition 103, California's Insurance Reform Initiative, outlawed such increases.

This struck me as a little hollow, considering the problems the state has had enforcing the most basic provisions of that law. The client never heard the rationale, however, since the next week I received a letter from his new attorney.

I find it very difficult to betray my strong instinct that money shouldn't govern one's sense of justice. So the longer I had to participate in this game, the less enthusiasm I had for my work.

This was matched by my growing sense of oppression when faced with the insufficiency of my reward: rock-bottom pay, no paid holidays, no sick leave.

Furthermore, my cases were always ridiculously screwed up. I attribute this

to the incompetence or indifference of the previous paralegal and the chaos that reigned in an office full of surly intellectual drones lashed on by the whip of their employer's calculating greed.

Employee morale was generally abysmal, despite Jim's on-the-clock volleyball matches and the microwave popcorn, licorice, and English Toffees in the office kitchen. Jim allowed us to set our own hours, but time clock cheating was rampant. Also, there was virtually no dress code.

I figured that such enlightened office policies were the carrot that kept many of us on the treadmill. I rarely had enough money to do my laundry, often going to work in what amounted to stinking rags compared to the attire of office workers in orthodox law firms a block away. One co-worker confided in me that she hoarded the microwave popcorn for emergency calories she otherwise couldn't afford, because for her the "pay per client" system amounted to subminimal wage—a situation she was forced to endure for free medical coverage for a long-term health problem.

The media has praised Jim Rogers for his contribution to his profession, and he's purported to spend all the surplus cash he can squeeze on some progressive political agenda. Jim certainly didn't spend the money on himself, often wearing cutoffs in the office and driving a battered little economy car.

I do know of one employee who started after I did, opted for the much maligned "pay per client" system, and was making enough per hour to almost justify the stress of playing lawyer. I quit after four months. Aryah, the union president, quit the same week. Deborah, who made \$13 an hour, a wage negotiated before the onset of pay per client, got laid off, with low costs winning out over worker skill and loyalty by a mile in the race among Jim's priorities.

— R.L. Tripp



graphic: R. L. Tripp

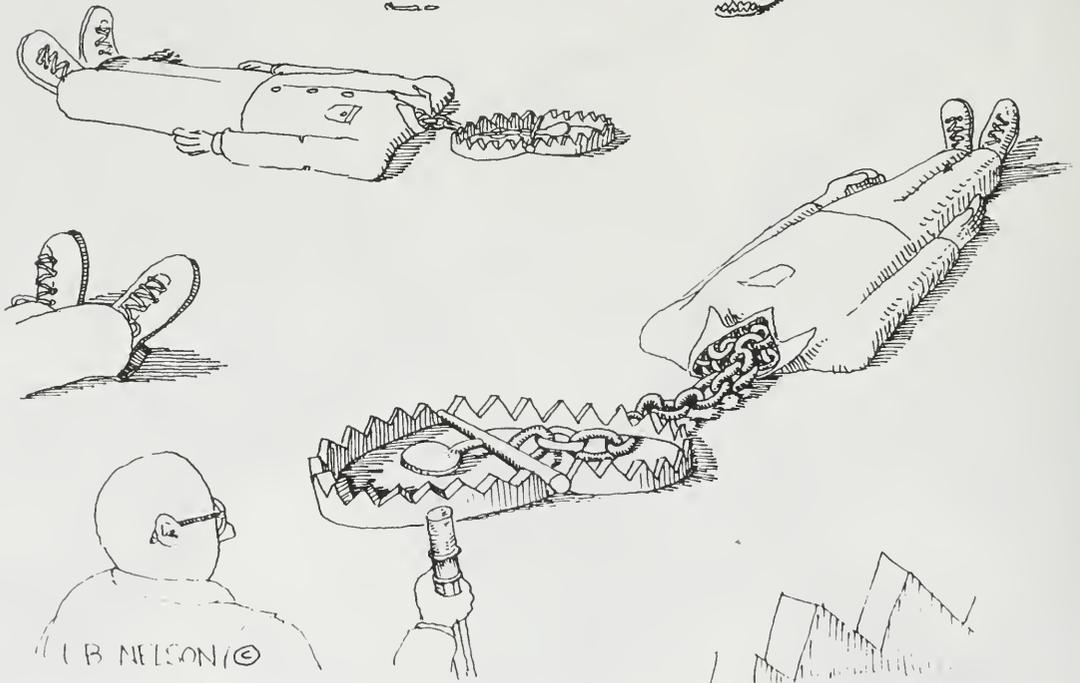
THE DEATH OF TONGUES

Radio tunes scrape scales
with clever pitches. There is
a feeling which has no body
and murmurs in front of me.
I don't want to live in a cave.
The most sluggish, lazy
fish in the world
is the monkeyfaced prickleback
active five minutes
a day when tide comes in.
It gulps seaweed and digests
fifty hours. Frustration
defines patience.
I am the sculptor
who pulled lead from old bathroom
floors, pounded it around himself
and became too heavy to move.

— *Nathan Whiting*

which is the
house of pain?
I finally see
where the
fanged crazy
man lives
his teeth a
mess of
wolf poking
over his upper
lip, jawing now
with the
Chinese retarded woman
as I go downtown
hunting for work
past the
mansion of
haunted
eyes —
damaged minds
staring blankly
while my
own mind
races w/
the fear of
no job

— *Marc Olmsted*



YOUR BODY IS YOU

THIS IS A WARNING A FIVE MINUTE WARNING
SILICON SATAN SUCKLES OVALTINE NIPPLE
PLASTIC SURGE MIGRATING BREAST
THIS IS A WARNING A FOUR MINUTE WARNING
TRIPLE-COOKED MEAT MICROWAVE BYE-BYE
MUTAGENIC ZAP OZONE DELIGHT
THIS IS A WARNING A THREE MINUTE WARNING
SHINSPLINT FEVER PIGSKIN PARADE
TATTOO CORTISONE IMPLANT FANNY
THIS IS A WARNING A TWO MINUTE WARNING
TOXIC PATTYCAKE CHEVRON INCITE
CATALYTIC CRAB COBALT NIGHT

THIS IS A WARNING A LAST MINUTE WARNING
YOUR BODY IS YOU IT IS ALL YOU WILL GET
YOUR BODY IS YOU IT IS ALL YOU WILL GET

— *Alan Mendoza*

COMING DISTRACTION

A lethal screen
 unbearable whiteness of war
 brings color to the cheeks
 we turn to the sun
 loading the clean magazine
 in desert scroll
 War Perfect cursors the new
 queer days brisk
 as the bureaucrat behind
 in his projections
 just signs
 the times are all there
 between incision and ecstasy
 falls the scythe
 harvesting a new generation
desaparecidos
 lost in a slip of the tongue
 a slim disease
 the papercut eyes
 glare at the gas plasma
 skyline warming
 this world may end in a flicker
 or a breeze
 attraction receding

—D.S. Black



OCCUPATIONAL HAZARD

Our first life
 Not entirely an accident
 Served to focus our intent.
 Seeing through opaque aquarium walls
 Our luminous frailty after all.
 No possibility exists of affecting
 What already transpires on the other side.
 All that remains
 Is to close with the night-rhythms
 To recall each secret breath
 To return to the womb of work
 Facing time as it comes, a reliable ally.

—Blair Ewing

PREOCCUPATION

Chaff is in my eye,
 A crocodile has me by the leg,
 A goat is in my garden,
 A porcupine is cooking in the pot,
 Meal is drying on the pounding rock,
 The King has summoned me to court,
 And I must go to the funeral of my mother-in-law:
 In short, I am busy.

—Mbundu origin (Africa)
 (translated by Merlin Ennis)

THURSDAY AT THE OFFICE

The sidewalk stiffly moans as it is force-marched down a path it never chose. The streetlamps hiss and whine hollow hymns as sodium and halogen are pumped through their veins, and thus these prisoners birth a yellow light, a cold light which later will deprive the city of its night. Skyscrapers carve a wide sky into cubes which even a wakeful eye could miss. There is no solace in this sky as narrow, close, it makes of the soaring bird a homing gone awry, a rock with wings, and thus, designed for you. The bird, ah, but the bird, the same one pardon me kamikazing toward your office window, not on the twenty-four or thirty-six-month plan, but at *this* very instant, and though you are at your phone, your picture window—panoramic consecration to all you have undone—has been awaiting this bird's intent since its days of sand. The music of exploding glass announces this harbinger of shrill tidings, the unutterable anagram which despite your gritting teeth, reveals the musical murmur below the tarmac you have clogged. From this point onwards, your golden tomorrows will refuse to flower. Go ahead. Pick it up from the rug. Heft this still-warm half-pound of integrity. Observe the splayed wings, the flattened beak, the fully rotating ball and socket head. But can you feel its heat, hear the ticking, see the red light in its eyes which will not fade, the memory, yes the memory, of *your* song.

—Art Tishman

PISSING IN THE GENE POOL

Advocates of biotechnology and genetic screening portray their task as a humanitarian endeavor—curing inherited disease. The images they present are diverse and compelling: slow death from cystic fibrosis, the frightening symptoms of Huntington's disease, the worries of would-be parents. Scientists and researchers are portrayed as hard-working saviors of suffering humanity. We are promised that more corpses will be identified, and that more criminals will be captured, as a result of genetic "fingerprinting." Yet these promises are a molester's lollipop—desirable trinkets to lure us into a trap. The intent may not be criminal, but the results can be just as dangerous.

"Public debate" about genetic screening is based on vague promises of future possibilities and ignores present realities. Despite promises about "the alleviation of human suffering," detectable genetic disorders constitute a minute fraction of the ailments of the species. Potentially curable disorders are basically limited to those in which a single gene is the problem. While a number of genetic disorders can be reliably detected, there are treatments for only a few. Some problems are susceptible to treatment if caught early enough (phenylketonuria, for example); most cannot be cured. Knowledge of such a condition may disincline people to have children, and prenatal testing may lead to consideration of an abortion. This same capability can also lead to more sinister possibilities.

Proponents argue that testing merely increases choices for individuals. The knowledge provided by genetic screens may lead to prevention of some problems (e.g., detection of the gene for familial polyposis may "prevent" colon cancer by removing the colon), but often the practical use of such knowledge is limited. Testing, even with volunteers, raises problems about implicitly informing others (e.g., relatives) who may not want to know.¹ And what about people psychologically incapable of dealing with the knowledge? Knowledge is a slippery

slope: today's mysteries are tomorrow's disorders. As we identify the function of more and more genes, the same imperative that compels us to analyze will lead us to classify and stratify. As social values evolve, incorporating new genetic concepts, how many people would not think it bizarre to terminate a pregnancy for genetically identified manic-depressive tendencies? Future artists may

Knowledge is a slippery slope; today's mysteries are tomorrow's disorders.

... The media will gladly repeat (and inflate) the more exotic claims...

Who benefits and who suffers, are social questions, not technical ones.

well have to arrive at their moments of creative passion by other means.

Sickle-Cell & Tay-Sachs

Detection of a gene-related malady is no guarantee that treatment will be rapidly developed. The classic example

— illustrative of both the promises and pitfalls of genetics — is sickle-cell anemia, which has been an object of intense scrutiny since the 1940s. Despite a detailed knowledge of its biochemistry, treatment has not advanced significantly, unless one argues that the elimination of certain possibilities constitutes progress towards an ultimate cure.

The Tay-Sachs disorder, a severely disabling — and fatal — malady of the nervous system, is also a recessive genetic disorder. It is found most commonly in northern European Jews, in whom about 1 out of 3000 is afflicted (1 out of 30 being carriers), versus 1 out of 600,000 for other northern Europeans. It can be detected by prenatal tests, giving parents an option to abort the fetus. It can also be detected in adults, who, having been born without it, are not at any personal risk. The rationale for screening is to allow people to decide if they want to risk having children. In the early 1970s, publicity and voluntary screening programs were started. By the mid-1980s some 310,000 people had been tested worldwide, finding only 268 couples in which both partners were carriers.²

One of the few objections raised was that not everybody in the Jewish population was equally at risk, and that a careful examination of family histories would have identified those most in danger. The widespread screening and publicity may thus have aroused unnecessary fears for many people.

Sickle-cell anemia is a geographically widespread, but relatively rare, malady that affects the blood's ability to transport oxygen. This can cause weakness, severe pain in the joints, damage to internal organs and a shortened life span. While the disease has long been recognized in Africa — where it is most prevalent — it was only identified by "Western" medicine in 1910. Only people with a copy of the sickle-cell gene

from each parent show symptoms of the disease; those with only one affected gene ("carriers") may have a somewhat higher percentage of the sickled hemoglobin cells which give the disease its name, but evidence that they are more susceptible to health problems than people without the gene is sketchy (there may be a slightly higher risk of kidney and spleen problems).

In 1968 and 1969, four apparently healthy black recruits with no history of anemia died during basic training at an army camp located about 4000 feet above sea level. Post-mortems revealed severe sickling of the blood; this could, however, have been a result of death, rather than the cause. Following a 1970 report in the *New England Journal of Medicine*, the National Academy of Sciences' National Research Council created a committee to study the issue. Despite a lack of conclusive data, they called for testing of all recruits for sickle-cell. The Air Force went even farther, disqualifying carriers from the Academy, as well as barring them from co-piloting aircraft and all combat aviation duties. Moreover, despite the conclusions of scientific studies that there were no significant differences between carriers and non-carriers, in the 1970s most major airlines fired or grounded personnel who were carriers. In 1979, Stephen Pullen — an excellent athlete, a mountain climber, and a carrier of sickle-cell anemia — was forced to resign from the Air Force. He sued, and eventually the Air Force changed its policy.³

This is an excellent example of irrational discrimination because of a genetic trait. None of the carriers looked or acted any differently than anyone else: there was no performance-related reason for the limitations. Indeed, a study of the National Football League showed that its members had a significantly higher percentage of carriers of sickle-cell anemia than the population at large (although average for the African American population as a whole), yet there were no sickle-cell related problems for these athletes who exercised hard, for years, in difficult circumstances in snow or at high altitude.

Despite being a far less dangerous disorder than Tay-Sachs, sickle-cell screening programs have mostly been involuntary and administered by an outside agency. The Tay-Sachs pro-

grams, in contrast, are relatively decentralized and are run and staffed largely by Jews. Given a history of medical discrimination, including the infamous 1932 Tuskegee syphilis "study," in which medical treatment was withheld from Black men with the disease for 40 years, it is not surprising that the sickle-cell programs were bitterly opposed by many Blacks. Such programs were ultimately unsuccessful, and many have now been ended, although a few states still require sickle-cell tests.

Regardless of how well intentioned, genetic screening does not take place in isolation from the rest of society. Even in a non-racist context, possession of a genetic disorder can result in discrimination, as Troy Duster illustrates in an account of Orchomenos, an area in Greece where sickle-cell anemia is prevalent: twenty-three percent of the population are carriers.⁴ The people who tested positive were stigmatized, even though they were not discernibly different from anyone else. The Orchomenos experience also shows that people don't reject genetic screening because of ignorance of

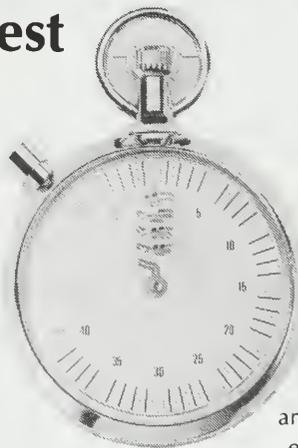
possible benefits. In point of fact, the African American population subjected to screening is better educated, more literate and more urbanized than the villagers of Orchomenos — yet the Greeks endorsed screening. As Duster says, "The level of trust, not the level of education, better explains such compliance."

Consider this 1968 statement by Nobel prize winner Linus Pauling: "I have suggested that there should be tattooed on every young person a symbol showing possession of the sickle-cell gene or whatever similar gene ... in a single dose. If this were done, two young people carrying the same seriously defective gene in single dose would recognize this situation at first sight, and would refrain from falling in love ... [L]egislation along this line, compulsory testing for defective genes before marriage, and some form of semi-public display of this possession, should be adopted."⁵

Beyond the absurd proposition that such a "scarlet letter" would preclude falling in love, Orchomenos shows that

Your finest hour . . .

was the moment you decided to have a genetic stopwatch surgically implanted in every cell. Not only will you never be late again, you won't be able



to lose track of time! Feeling each picosecond passing will open up new frontiers of personal time and space! **And to top that,** the U.S. Association of Industrial Manufacturers has announced preferential employment consideration for all **CellClockers . . .**

Forget

- Alarm Clocks!
 - Clock Radios!
 - Punching In!
- You'll be **PUNCHED IN** for LIFE!

CELLCLOCKERS *

Not Just Another Bio-Implant—A Way of Life!

* works with our new *micro-manager* implant to reduce annoying behavior patterns!

A DIVISION OF GENERICO-CONTEK

People Like You Helping People Like Us Help Ourselves

"actual carrier status . . . did not play a decisive role in avoidance of mates."⁶ At best Pauling's statement is naive and hopelessly ignorant of the real world; at worst, it is first cousin to compelling Jews to wear yellow stars to warn the public of the "menace." The Nuremberg War Crimes trials specifically condemned legislation targeting ethnic and racial groups; legislation that calls for compulsory testing for racially linked genetic traits does precisely that.

Technical difficulties aside, more people will be faced with discrimination as genetic screening becomes common. Some already more-or-less clearly identified groups (e.g., African Americans, Ashkenazi Jews) may find some solidarity in facing such problems, but overall this new "knowledge" is unlikely to help them — rather, it will isolate them even

more. Others, not benefiting from any existing solidarity, will face even greater isolation.

Looming behind prospects of fragmentation and stratification is a more sinister possibility — control. A clinical genetic counselor can subtly manipulate a client's decision by shading the presentation of statistics (for instance, 1 chance in 200 of something bad happening doesn't seem so bad, unless you compare it to 1 chance in 5000).

A grimmer type of control is becoming increasingly common: the intervention of a third party in the traditional doctor-patient relationship. As an example, consider a woman who is carrying a fetus with a major defect and decides not to have an abortion. Her insurance company, which may have paid for the test in the first place, states

that it will not cover medical services for that child. The woman's financial options thus narrowed, she "chooses" an abortion. In an analysis of clinical counseling sessions for people at risk for Down's syndrome, Duster shows how even subtle comments can have a large impact.⁷ In more callous hands such "counseling" would be far more manipulative.

DNA Fingerprinting

In addition to manipulative uses of genetic screening, biotech also claims it can "fingerprint" people. The Pentagon is investigating its use in identifying corpse fragments. It is also used to convict people by linking bits of their DNA to crimes.

This methodology employs what are known as "Variable Number Tandem Repeat" genes [VNTRs], which vary greatly from one person to another. They supposedly identify individuals based on samples of DNA — usually less than half a dozen — that are extracted from tissues and compared with traces from a crime scene. Proponents claim that there is "less than one chance in a trillion" that two genetic samples are identical by chance. This argument depends on some basic assumptions about population genetics and the distribution of these genes. As Laurence Mueller explains: "All the major forensic labs calculate the frequency of these patterns by the product rule. This rule assumes that the copies of a gene you inherit from each parent are independent and that these pairs . . . are independent of [any other] pairs . . . both assumptions of independence will be violated if populations are structured. . . . The possible errors . . . are potentially enormous. . . . A publication . . . from the FBI laboratory actually presents a statistical analysis . . . which shows these independence assumptions are violated."⁸ The FBI argues that the assumptions are valid anyway. Erroneous statements of identity may also result from laboratory errors. A false positive occurs when two samples are identified as being the same even though they are not. Mueller cites a proficiency test given to Cellmark, a private testing laboratory, in which the lab made two false positives out of a sample of 100. At best, then, Cellmark can claim a chance of 1 in 50 that there is a mistaken identification of two samples of DNA. The problem, however, doesn't lie with the professional competence of any given

PARENTS: IS YOUR BABY

ALIVE WITH PLEASURE?!!

Well then it's time to begin channeling that pleasure into useful consumption habits that will become the backbone of American Commerce. Forget about a SuperBaby— Sign up your newborn to be a

BUTT BABY!



A consortium of U.S. tobacco companies is offering new parents a special deal: Sign your child up before they're two years old and s/he will qualify for a special drawing to win **HUGE SCHOLARSHIPS!** And they will get free cigarettes while in college, the military, or incarcerated (forever!). A **free signing bonus is yours:** a rubber-lined, specially designed oversized ashtray/crib

graphic: IRS

lab, but rather with the inadequately tested application itself.

EUGENICS — From IQ to Sterilization

Genetic screening, intertwined with race and social power, is also affected by history. For many, genetics has the immediate connotation of *eugenics*, a word coined by Francis Galton from the Greek words for “well-born.” He argued for “judicious matings . . . to give the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable.”⁹ It should be noted that reactionaries aren’t alone in praising such ideas — George Bernard Shaw and H.G. Wells, among others, were proponents of eugenics. As a rule of thumb, genetics will be used to explain the lower classes’ “failings;” positive attributes will be explained by “culture.”

In Germany eugenics combined with mystical concepts of a “pure” Aryan race and led to Nazi barbarism — the deliberate killing of the “medically unfit,” and the extermination and enslavement of “inferior” races to allow the “pure Aryans” of the S.S. to repopulate western Russia.

In the United States the popular (but less deadly) eugenics movement pushed for prohibitions on immigration of “inferior races,” and for sterilization of “defectives.” In 1905 Alfred Binet devised an “Intelligence Quotient” test to help teachers with students who weren’t responding to standard methods (Binet did not believe in innate stupidity). As with other well-intentioned inventions, however, the IQ test soon came to be a tool for ranking people in a divisive — and derisive — manner. By 1912 it was being used at Ellis Island to screen out “feeble-minded” persons; forty percent of Jewish immigrants were so categorized.¹⁰

In 1917 the Army began testing large numbers of recruits and used the results to screen for officer training. This data was used in the ’20s by eugenicists to argue that immigrants from southern and eastern Europe were less intelligent than their northern European counterparts. It was partly on this “evidence” that the Immigration Act of 1924 was passed, which drastically reduced the flow of southern and eastern Europeans (and thereby Jews).

Sterilization laws were passed in some 30 states. By 1935 some 25,000 people had been sterilized (most of them in California); by 1956 the number had reached 58,000.¹¹ The Supreme Court

upheld the sterilization of imbeciles in the 1927 *Buck v. Bell* decision. An institutionalized Virginia woman, Carrie Buck, was ordered sterilized on the grounds that not only were she and her mother imbeciles, but she had given birth to a girl also claimed — at one month old — to be feeble-minded. (It was in this case that Justice Oliver Wendell Holmes stated that “three generations of imbeciles is enough.”) Although Carrie Buck’s daughter was later tested at a more reasonable age and was found to be of above-average intelligence, the decision was never overturned.¹²



graphic: PW collective

Seven years later, in *Skinner v. Oklahoma*, the Court overturned a law that ordered the sterilization of persons convicted of three separate felonies — not because it was morally wrong, but because the law excluded certain kinds of “white-collar” crime, violating the 14th Amendment’s guarantees of equal protection. The validity of sterilization to “treat” antisocial behavior was not questioned.

Because of the unhealthy aroma of the

Nazi nightmare, eugenicist ideas retreated temporarily after 1945. In the late 1960s these theories began to reappear. Borrowing some of the lustre of molecular genetics and its (limited) successes, they crept back, addressing precisely the same complex behaviors — intelligence, insanity and criminality.

Criminal Genes, Stupid Genes

In 1965 the British magazine *Lancet* published an article on 197 patients at a high-security mental hospital in Scotland. They had been chosen because they were “mentally subnormal male patients with dangerous, violent, or criminal propensities.”¹³ The researchers found that seven (3.5 percent) of the men had an unusual genetic abnormality. Instead of the usual pair of XY chromosomes (one from each parent; the mother always contributing an X, the father contributing either another X or a Y), they had an XYY configuration — an extra copy of the chromosome that determines the development of males. Could that extra Y chromosome predestine a child to a life of crime and violence? Could it shed light on genetically normal males and aggression? Studies showed a disproportionately high ratio of XYY males in prisons and mental hospitals, which the media sensationalized. Prenatal screening was proposed, with abortion being the implied “treatment.” In 1968, Walzer and Gerald at Harvard began a long-term study that screened male infants born at the Boston Hospital for Women. Although there wasn’t any “therapy,” the researchers proposed counseling sessions with “anticipatory guidance.”

By 1974, however, the study was being challenged. Geneticists Jonathan Beckwith at Harvard and Jonathan King at MIT published a paper in *New Scientist* that attacked the studies of the XYY condition on several grounds. “They had been poorly designed, filled with logical inconsistencies and crippled by inadequate comparisons with matched, normally functioning XYY males as controls. . . . At the core of their critique . . . [were] serious ethical questions . . .”¹⁴ Perhaps most important, Beckwith and King objected to labeling an innocent child “as genetically prone to aggression and violence. This label could also contribute to a childhood setting in which a level of anger quite acceptable in a normal XY boy would be treated with undue concern by fearful parents . . . This distortion could generate new behavioral problems.”¹⁵

While the Harvard research review committee did not halt the study, Walzer announced in 1975 that he was ending it. Within a couple of years most XYY studies had folded. A 1979 review concluded that there were no consistent differences between XYY males and "normal" XY males other than the chromosome difference itself; almost all XYY males lead quite normal lives. In addition to the methodological problems of trying to generalize from a narrow sample (people in prisons) to the population at large, the XYY studies showed a certain callousness to the subjects. The debate was also clouded by those who wanted to show that males are genetically prone to violence. It was further confused by people with little understanding of genetics, such as those who wished to "weed out" the condition, which is impossible, as it is not a hereditary problem. It can occur during the creation of germ cells during each and every generation. The XYY studies, like other eugenicist work, presented a simple answer for complex issues, and did so by focusing on "problems."

Mental abilities have also been subject to simplistic explanations. Intelligence undoubtedly has a polygenic component, and is clearly affected by very complex environmental factors. This is virtually ignored by those positing a genetic (and usually racial) basis for intelligence.

Duster points out that in the early part of the century, various universities and schools implemented standardized testing in order to exclude Jews, who had low IQ scores as immigrants. By the 1960s, however, this supposed genetic "problem" seemed to have vanished from the Jewish population, whose scores on standardized tests were above average. A study in Scotland compared Jewish school children with their peers and found that the Jews on the average were scoring 117.8 on IQ tests, while their schoolmates were averaging — as expected — 100. Duster compares this with Arthur Jensen's racist studies on IQ, which found comparable differences with the Scottish study: "The difference in means is statistically significant at a level remarkably comparable to mean differences between blacks and whites in America that Jensen ... reported. The author of the Scottish report [unlike Jensen] chose to interpret the results as explainable by cultural not genetic factors."¹⁶

Although genetic explanations of behavior have taken the molecular genetics mantle as their own, proponents are unwilling to heed studies that discredit their position. Despite repeated studies that cast doubt on simple genetic explanations of mental traits, the same old lies are repeated. Jensen, for instance, based part of his work on Cyril Burt, a leading proponent of innate mental differences between classes. Burt was discredited for forging data in his studies of twins, which helped justify the class-based IQ tracking in British schools. In the study of heredity and insanity many papers continue to cite the long-discredited work of Franz Kallman, a student of Ernst Rudin, who advocated sterilizing schizophrenics in Nazi Germany. Bad science has a way of living

on, especially when it is politically useful. While the "old eugenics" will not return in its original form, the political agenda that drives the implementation of genetic technology hasn't changed.

Genetic Values

Just as our cultural values influence what science studies, science's views shape our own world. Common risks in any new field are simplification and the attempt to explain too much. While most molecular geneticists are unwilling to make grandiose claims, others in kindred fields are not. The media will gladly repeat (and inflate) the more exotic claims. Beyond the obvious issues of racism and prejudice, a simple reading of genetics encourages a deterministic view of the world; this gene says thus-

THIS MODERN WORLD by TOM TOMORROW



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and-such, and so it will be. In fact, most phenotypes — the expression of genotypes — are strongly influenced by environment. But such explanations are not as popular as they were a quarter century ago, and have never held much appeal for those in power. Genetic heritage is a ready explanation for failure and success. Given the American predilection for avoiding personal responsibility, such an easy explanation is bound to find adherents. As Gregory Kavka points out, “Old aristocracies of birth, or color, or gender may dissipate, only to be replaced by a new genetic aristocracy.”¹⁷ Society may come to view parents as being more responsible for their children, while parents may see their children more as a

product line. Society may further reduce its already meager tolerance for diversity.

Modern genetics is, for the most part, limited to studying “problems,” not only out of cultural bias (and human sympathy), but because such obvious genetic “errors” as Tay-Sachs and phenylketonuria are (relatively) clear expressions of single genes. While such small advances are pleasing, they feed the idea that scientific progress takes place in cumulative increments. With (relatively) primitive tools it’s certainly easier to study simple problems; but polygenic conditions may not be susceptible to the same methodologies. In this case a quantitative increase may well lead to a qualitative change in the problem.

One of Western science’s advantages has been its ability to study single events, isolated from the complexities of real life. It is not clear how well our current theories and tools will deal with the extraordinary complexity of human genetics, despite the fond dreams motivating mega-research projects such as the Human Genome Project. Furthermore, the real — if limited — success of the field feeds an unhealthy tendency towards a manipulative and instrumental view of humans and nature. As geneticists become more adept, and as society becomes more technologically jaded, experiments that would not be given serious consideration now may well become the norm.

Complexities: “Useful Diseases” and “Junk Information”

Sickle-cell anemia illustrates a thorny question: When is a disorder bad? Sickle-cell can be debilitating for some of the afflicted, but most people with the disease lead normal lives, and carriers aren’t affected at all. Indeed, the sickle-cell trait helps to prevent malaria in carriers, which accounts for the relatively high frequency of this genetic “disorder.” One book on modern genetics manages to discuss sickle-cell anemia for many pages without ever mentioning this!¹⁸

Genetic variations may have hidden benefits, which makes naive genetic manipulation in whole populations a very scary concept. Science simply does not know enough about the body’s chemistry, or about the subtle interactions of different genes, to state with confidence the likely consequences of eliminating (or changing) a given gene.

Neurofibromatosis (NF), an autosomal recessive disorder (meaning that a “dose” of the gene from both parents is needed to cause the problem), affects about 1 out of 4000 people worldwide, making it a relatively common malady. It is expressed in a wide variety of symptoms, which makes diagnosis difficult. This complexity is mirrored at the genetic level as researchers have realized “that identification of the large NF gene had been elusive because three other genes are embedded within it . . . [and] the functions of the embedded genes are not known . . .”¹⁹ Such intervening sections of genetic material (*introns*) are sometimes referred to as “junk information,” but such segments of DNA are not necessarily unused. A genetic problem can have more than one genetic expression. “Importantly, the particular gene-

graphic: Arch D. Bunker

tic change ... found in a particular CF [cystic fibrosis] patient is not constant among all individuals with CF. The most common CF mutation occurs in about 70 percent of the cases ... practically 50 other much less common CF-causing mutations are known ..."²⁰ Such complexity makes mapping the gene (i.e., identifying known pieces of DNA that are found in afflicted people, and not found in others) much more difficult, and makes accurate sequencing (listing precisely all of a gene's constituent bases) even more difficult. The challenges of genetic therapy are yet more daunting.

And Now?

Science's ability to produce a technical solution to every problem is fundamentally a question of scientific self-promotion. Promises of gene therapy, for example, are not credible. The indeterminate nature of genetic manipulations and individual variability promises that such ventures will be tentative at best. One recent trial involved a transfusion of white blood cells carrying a gene for a substance a patient was deficient in.²¹ There was no attempt to change the cells that manufactured the patient's white blood cells so they would have the correct gene; the billion engineered cells in the transfusion all died relatively quickly. Even the most ardent advocates of gene therapy are not planning to tamper (yet) with the germ cells that control reproduction. The tinkering is limited to somatic cells — those that constitute our bodies. Any plan to "eliminate" a disorder such as Huntington's disease by tailoring sperm/egg cells so that they do not have the defective gene belongs to the remote future.²²

But we shouldn't ignore problems closer to hand. Diane Paul has argued that eugenics — as a code-word for coercion — is the "approved" anxiety of the Human Genome Project.²³ We shouldn't be blind to the repressive uses of genetics, but we should not ignore issues of personal choice and freedom that genetic medicine raises. Virtually any screening can determine a fetus' sex long before birth. What shall we do with this new power? In Bombay in the early '80s there were 7,997 female fetuses from 8,000 abortions.²⁴ At least some of the problems are clear, and are not limited to the "Third World." Solutions, however, are not so apparent. Pass laws? Depend upon "the marketplace" to allocate the benefits? Do we envision a world

in which individuals have more freedom because of genetic knowledge, or one in which healthy people are diagnosed as being diseased, and the results broadcast to the world like a bad credit rating?

In this country different legal remedies have been proposed to deal with the spread of such information, but there is opposition to controls. The Health Insurance Association of America's Jude Payne, criticizing legislation barring insurance companies from access to individuals' genetic information, said "We need to know what they know. ... Why is genetic information more confidential than other medical information?"²⁵ Denmark's parliament recently resolved to introduce legislation to ban the use of genetic testing for insurance, pension and employment purposes. This narrowly passed bill (61-60), introduced by the Socialist Party, speaks of intervening in the use of DNA analysis "before it is too late."

As Evelyn Fox Keller put it: "you

don't have a new eugenics without genetic screening. ... [T]o intervene effectively you have to be able to be critical, to know what the limitations of the information that is being transmitted are ... You have to be aware of the ways in which that information — even with qualifications — will be heard in different ways by different groups of people."²⁶ Certainly an emphasis on education is important, although Keller points out that "there are many people who are genuinely concerned and eager to pursue these questions [of ethics]. What you find is that they don't have the terms, they don't have the vocabulary with which to do it."

Who benefits, and who suffers, are social questions, not technical ones. In a society in which these questions are ignored, or the province solely of experts, we have neither a language nor a forum for such a discussion. Does silence indeed imply consent?

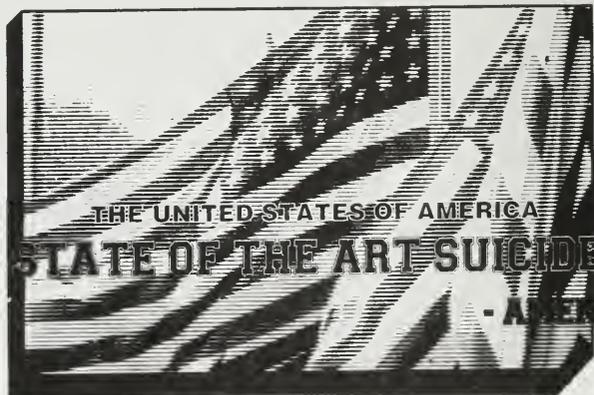
— Primitivo Morales

FOOTNOTES

- 1) Lois Wingerson, "Mapping Our Genes — The Genome Project and the Future of Medicine," 1990, Penguin, New York, NY, Chapter 10, "Frances," pages 255-280.
- 2) Troy Duster, "Backdoor to Eugenics," 1990, Routledge, Chapman & Hall, New York, NY, page 26.
- 3) Duster, op. cit., pages 43-45.
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- 8) Laurence D. Mueller, "Population Genetics of DNA Typing," paper presented at University of California Humanities Research Institute conference (UCHRI), May, 1991.
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- 13) Suzuki & Knudson, op. cit., page 127. See Chapter 6, pages 123-141 for a detailed discussion of the XYY issue.
- 14) Suzuki & Knudson, op. cit., page 136.

- 15) Suzuki and Knudson, op. cit., page 136-137.
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- 18) Lois Wingerson, op. cit., pages 62-75, 70-75, 289-291.
- 19) Jeffrey L. Fox & Jennifer Van Brunt, "Towards Understanding Human Genetic Diseases," *Bio/technology*, October, 1990, page 909.
- 20) Fox & Brunt, page 906.
- 21) "Gene Therapy Protocol Begins," *Bio/Technology*, October, 1990, page 889.
- 22) See Suzuki and Knudson, "Gene Therapy", Chapter 8, pages 163-191 for a discussion.
- 23) Diane B. Paul, "Eugenic Anxieties, Social Realities, and the Genome Initiative," paper presented at UCHRI conference, May, 1991.
- 24) Duster, op. cit., page 33.
- 25) John Hodgson, "Denmark Bans Use of Testing Info," *Bio/technology*, June, 1991, page 508.
- 26) Evelyn Fox Keller, "Decoding the Human Genome Project," interview by Larry Casalino, *Socialist Review*, 91/2, page 127.

One of a series of 4 post-cards, each of which are different anagrams of "The United States of America." Another image is of the Statue of Liberty with the caption "Statue in search of a meat diet." They're by Max Handley (1945-1990), and can be obtained from Tony Allen c/o Knockabout Gallery, 10 Acklam Rd., London W10 5QZ, England.



CASTRO'S GENES

We've all heard stories about Cuba's embedded bureaucracy, centralized planning, restricted freedoms and undemocratic decision making. Yet Cuba has made some remarkable advances since the revolution. Living conditions have improved considerably, particularly public health. Life expectancy (75 years) and infant mortality (10 per 1000) are comparable to Western Europe. Cubans have access to one of the best health care systems in the world for free.

Intrigued, I went to see the island myself. I travelled as a researcher, one of the few legal ways to bypass the travel ban. As a medical worker, I wanted to get a first hand look at Cuba's health care system and biotechnology industry.

FIRST WORLD TECHNOLOGY, THIRD WORLD ECONOMY

Health care has been a high priority of the Cuban government (15 percent of total GNP) since the early days of the revolution. Considerable resources have been invested in new technology, drugs, doctors, and increased access, especially for rural dwellers. The fledgling biotechnology industry provides the medical system with both drugs and diagnostic tools.

Cuba's biotechnology industry began in 1981 when a group of scientists began producing human leukocyte alpha interferon to treat outbreaks of dengue fever virus and acute hemorrhagic conjunctivitis ostensibly caused by CIA biological weapons. A decision was then made to create an institution for the production of interferon on a larger scale and to promote the development of molecular biology in general. In January 1982, the CIB (*Centro de Investigaciones Biologicas*, or Center for Biological Research) was inaugurated.

Between 1982 and 1986 the government invested heavily in the CIB, sent scientists to Europe and Japan for training, and succeeded in building Cuba's biotechnology industry to a technological level approaching that of industrialized nations. By 1986 Cuba was hosting

international seminars on biotechnology, attended by hundreds of delegates from dozens of countries.

In 1986, the new CIGB (*Centro de Ingenieria Genetica Y Biotecnologia*, or Center for Genetic Engineering and Biotechnology) was inaugurated on the outskirts of Havana, replacing the out-



Cuba's biotechnology industry began in 1981 when a group of scientists began producing interferon to treat outbreaks of dengue fever virus and acute hemorrhagic conjunctivitis, ostensibly caused by CIA biological weapons.



dated CIB facility. The Center is a complex of research, production, and quality control units similar in layout to U.S. biotech facilities. The complex has modern equipment, mostly imported from Europe and Japan, some of which is identical to that used by biotech companies and universities in the U.S. (e.g. Pharmacia-LKB brand chromatography equipment, made in Sweden).

In spite of this technological growth, Cuba is in no way self-sufficient. The

U.S. embargo, the fall of communism in Eastern Europe and the collapse of the Soviet economy have led to a severe fiscal crisis called the "special period." There are long lines for basic supplies, including food. Also in short supply are many essential medicines, a problem that the CIGB hopes to alleviate by producing drugs domestically.

CIGB officials claim to have produced an extraordinary amount of drugs, including four types of interferon, human transfer factor, recombinant epidermal growth factor, recombinant streptokinase, and recombinant Hepatitis B vaccine. They also claim that CIGB produces chromatographic media, monoclonal antibodies, an HIV diagnostic system, enzymes, restriction endonucleases, nucleic acid modification enzymes, plasmids, and phages. Some of this I was able to corroborate, such as the HIV diagnostic system, while Cuba's production and use of interferon is described in scientific journals.

HUMAN NEEDS vs. FLASHY TECHNOLOGY

The stated goal of Cuban biotechnology is to meet human needs and promote self-sufficiency. A CIGB official told me that only "sure things" are funded. If an AIDS drug is being produced successfully elsewhere, for example, and is known to work, then "we will invest the time and money producing it. We are not likely, however, to receive funding to look for a cure for AIDS because it is an expensive, long-term project, requiring considerably more resources than we have readily available, and it is unlikely to lead to any immediate benefits to the public."

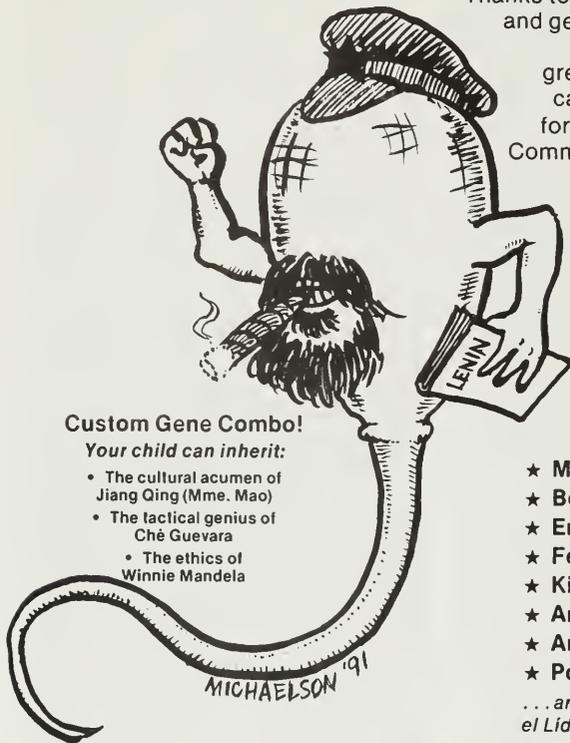
Cuba's production of interferon contradicts this policy of focusing on proven medications. It is strikingly similar to one of the primary problems of capitalist biotechnology: overemphasis on the new and exotic. One implication of this, in

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produce more food at lower cost. They are also working on developing resistant strains of tobacco, coffee and citrus, which could decrease the need for pesticides, though they did not indicate if similar attempts were being made to improve the resistance and resiliency of staples such as rice and beans.

NEW AGE CASTROISM?

Cuba is directing some research into "green" medicine, in which researchers examine the usefulness of herbs already known to folk healers as effective medicines. Use of herbal remedies was once widespread in Cuba, and continues among Cuba's Chinese community, but declined as modern medicine became more accessible. In the late 70s and early 80s, however, Cuban clinicians realized that these medicines were not only expensive, but have many side effects. Herbs currently being examined include: Yerba Buena (mint), which can be used as a topical antiseptic and cough suppressant; Cona Santa, for its effectiveness as a sedative; and oregano, for its diuretic and hypotension effects.

The fact that medicines reach the Cuban people for little or no cost may contribute to the optimism and enthusiasm I noticed among Cuban biotech workers. Researchers felt they were contributing to the revolution by providing an essential medical service. Biotech workers in the U.S. also believe they are providing a useful service to the public, but seem more cynical about their role.

The Cuban public appears to be very proud of their health care system, yet barriers exist to the continued improvement of public health. AIDS prevention, for example, attempts to popularize condom use through radio and T.V., but does not target culturally distinct groups. Despite a large number of Afro-Cuban and women doctors, all the health officials I saw in Cuba were heterosexual white males. Denial by health care bureaucrats that a gay community exists in Cuba hinders adequate prevention efforts.

The Cuban health and biotechnology industries provide essential, beneficial services to the Cuban public with modern technology. Yet Cuba's paternalistic socio-political system gets in the way, leading to an abuse of power and potential social catastrophe. Nevertheless, as a low income, uninsured U.S. citizen, I believe health care in Cuba is unquestionably superior.

—Michael Dunn

graphic: M.C.B. & Louis Michaelson

both Cuba and the U.S., is neglect of more urgent public health needs.

When Cuba began work on interferon back in 1981, it was thought to be a wonder drug for the treatment of cancer and viral infections. In the laboratory it has been shown to inhibit viral replication and tumor growth and to improve immune response, indicating a wide variety of potential uses. Ten years later, however, interferon has not been the panacea proponents had hoped. While it is generally considered effective for treating Kaposi's Sarcoma and chronic hepatitis B, interferon has not yet found widespread therapeutic use in the majority of cases and has made surprisingly little progress in clinical tests on humans.

Other drugs being produced at CIGB are potentially more useful than interferon due to proven clinical success.

Streptokinase, an inexpensive drug that dissolves blood clots in the heart, is an important medication in Cuba, where heart disease is one of the primary causes of death. Domestic production of the vaccine for Hepatitis B (which is very expensive to import) could save money and lives, given its prevalence in the tropics.

Cuban biotech is also working on improving agricultural diversity and productivity. Cuba has a large and fertile base for agriculture, but in the past it has been used primarily for monocultures like sugar and tobacco. After disastrous results, the government is again diversifying crops. The CIGB hopes to improve output through the use of biofertilizers (micro-organisms able to convert raw materials in soil into organic materials). This could reduce imports of expensive and dangerous chemical fertilizers and

melt DOWN TIME

GO WITH THE FLOW: MUTATE NOW, AVOID THE RUSH!

The Department of Health Services (DHS) is presently trying to license a low-level radioactive waste (LLRW) dump in the East Mojave Desert's Ward Valley near Needles, California. After a couple of legal snags are ironed out, the dump can theoretically begin operating by year's end.

According to federal law, states will have to dispose of their own nuclear waste by 1993. This clears the federal government of liability, and virtually mandates nuclear waste dumping. The theory is: out of sight, out of mind. Still, every state except California has slowed down or stopped their dump licensing process, taking their cue from states with leaky dumps that had to be closed. So far every LLRW dump in this country has leaked; the only three still in operation want to restrict intake by 1993. Since no new LLRW dump has been created in the United States in 20 years, the nuke industry is getting desperate and Needles could easily become a national dump. Eighteen states have already expressed interest in dumping there. In the future, the 70-acre dump license application could easily be expanded since no one's watching: the land transfer for the site is 1,000 acres.

The pro-nuclear Department of Energy (DOE) estimates 80 percent of radioactive waste nationally comes from nuclear power plants. The industry needs dumps to handle the enormous increase in waste from a planned new generation of plants. California's site is central to the agenda, as California is supposed to lead the way and encourage other states to build their own dumps. In the industry's favor, California is known as environmentally aware, which helps project a safe image. In the meantime, Needles will be open game, as California cannot legally refuse waste from other states if federal officials declare an "emergency."

In many ways the Mojave Desert, arid and remote, represents an ideal dump site for the nation's nuclear industry. The press covers up disasters such as Hanford and Rancho Seco, reporting on these "accidents" only years later. Why not have them someplace far removed? What's in the Mojave besides a few cacti and desert tortoises?

In any case, with the nation's fifth largest nuclear industry, California has more than 2,200 licensed nuclear operators who are paying the state to build a dump. Often located on faultlines, these companies cannot safely store on-site. As an incentive, the state will have to start paying liability fees if a dump isn't created by 1993. And why limit nuclear waste? It can be profitable since the DOE will pay for waste by-products such as radioactive cesium and cobalt. Waste can be used in food processing too.

The DOE says only 6 percent of waste by volume, and 0.5 percent by radioactivity comes from medical sources. But U.S. Ecology (USE), the dump contractor chosen by the Department of Health Services, lied about this, saying that 80 percent of LLRW is medical. In the discussion of medical waste, the industry typically manipulates statistics by discussing LLRW in terms of volume as

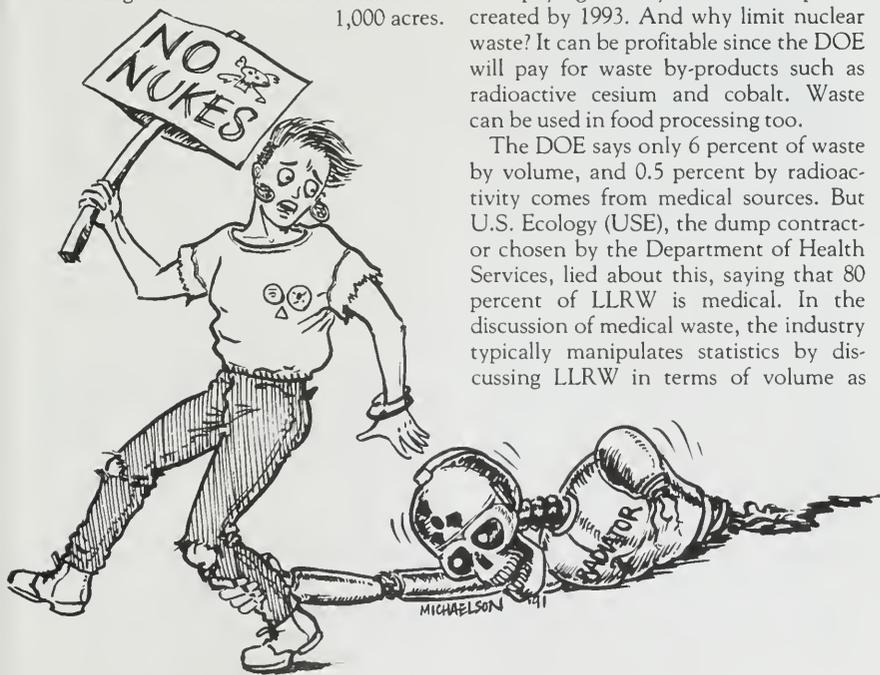
opposed to radioactivity. Industry PR men exploit the public's ignorance about radiation by failing to mention that radiation is harmful in trillionths of curies.

"Low-level radioactive waste" is a misleading term, for low-level wastes can be even more toxic than high-level wastes, remaining deadly for hundreds of thousands of years. Legal definitions are also manipulated, with wastes from decommissioned nuclear power plants. Highly radioactive fuel cores are defined neither as high-level nor low-level wastes; because of this uncertainty, they could someday end up in LLRW dumps. The nuclear industry uses a variety of jargon, scientific and legal, to promote confusion and further its interests.

USE was chosen by the DHS to operate Ward Valley despite a history of legal and environmental misconduct. Currently involved in litigation over several toxic waste dumps and a LLRW dump in Kentucky, USE tried to flee Illinois when sued for \$100 million over its badly leaking LLRW dump. In part, Illinois' experience is delaying California's licensing process, as the state controller, Gray Davis, wants evidence that USE would be liable for its own mess. But insurance companies won't cover cleanup costs for migratory contamination: townspeople in Illinois wanted their dump entirely removed and got only \$8 million. When it comes to nuclear matters, the public eats the industry's mistakes.

USE tried to escape its bad reputation by changing its name from Nuclear Engineering and went into isolated, economically-depressed Needles promising jobs. The possibility of employment won local support until residents learned only a few jobs would be created, as USE monitors its sites as little as possible.

What worries people is that USE's plans for the Mojave — digging shallow, unlined trenches as receptacles for LLRW, which could be packaged in plastic bags or cardboard boxes — led to disaster in other states. Then Bechtel entered the picture, hired by USE to study the Mojave's waterways and determine if the desert would be safe from contamination. Since Bechtel happens to be a huge nuclear producer, the corporation not surprisingly decided Ward Valley is a "closed system" and would not endanger any water sources.



Yet the area is known for its flash floods and the Colorado River, which supplies LA and much of the southwest with water, is just 13 miles away. The dump site also sits right above a huge underground lake.

Native Americans say the Mojave's waterways are beyond our understanding, and their ancestral lands will be endangered by USE's dump. But in Sacramento, the claims of indigenous peoples count about as much as desert tortoises (which USE plans to make safe by building fences to keep them off-site). The same with Needles: only a few thousand people live there; their vote hardly counts. If the DHS plays its cards right, the dump will be licensed before the rest of California knows about it.

At the moment a state-wide coalition, Don't Waste California, is working to stop the dump, using legal means. But if legal efforts fail — and the coalition is having trouble recruiting "pro bono" lawyers to work on the case — then direct action will be the next step.

For info on how to stop the dump, contact Abalone Alliance: (415) 861-0592 or Seeds of Peace: (415) 420-1799.

— Lili Ledbetter



ENVIRONMENTAL ACTIVISTS IN BRAZIL SPEAK OUT!

After the First Gathering of the Indigenous Peoples of the Xingu River Basin in Altamira (Feb. 1989), we resolved to create and register the Ecology Group of Xingu (Grupo Ecologico do Xingu), for the preservation of the entire ecosystem in the northern area of the Xingu River Basin. This work involves: Indians living in the area, and other people of the forest (rubbertappers, settlers, fishermen, goldminers, etc.). We are involved in educational work through the schools in first and second

grades, and lectures in communities and neighborhoods of the city.

We face a lack of resources and materials. We don't get any support, as the municipalities of this region don't support environmentalism, all the local politicians and powerful people are members of the UDR (Rural Democratic Union — sponsors of right-wing *pistoleros* who murder labor and church leaders in the region), and are also huge landowners.

We conducted an arduous study on the question of mercury pollution in our rivers here in Amazonia, fruit of the uncontrolled gold mining. From this experience, we wrote a cautionary little book in a popular style (*Oxente Bichin! Mercurio? Nao!!!*), denouncing what is happening.

Recently another union leader was killed in the town of Rio Maria, over a land struggle. They caught the assassin, but the instigator remains untouched, and worse is that the Public Defender is a UDR leader in the south of Para.

In 1992, there will be a big United Nations meeting on environmental issues in Rio de Janeiro. We are thinking of holding a parallel convention, since it is assumed that the UN will fail to address either our expectations or our necessities.

— Joao de Castro Ribeiro

Caixa Postal 676, Agencia Centro,
Belem, Para, 66,000, Brazil

POPULAR VIDEO IN THE WAKE OF THE PERSIAN GULF WAR

The most far-reaching aspect of popular video use in the United States has been the growth of the public access movement. Access to channels and studio space and equipment is part of the cable franchising process in cities and towns across the nation. This movement has been under-reported and misunderstood by both main-stream press and media critics. It is a grass-roots movement of tremendous potential, although it varies a great deal in details from city to city.

In 1981 I was one of the founders of the public access TV series, Paper Tiger Television. These programs have been developed not only as programming on Manhattan Cable (and several other systems around the country) but as a model series for creative low-budget use of studio, small format cameras and local resources. The Paper Tiger Collective



People around the country make shows. . .

has now produced almost 200 programs of media criticism.

Paper Tiger drew a number of enthusiasts from around the country and we were able to make contact with other progressive public access users, many of whom expressed the desire to exchange programming. It was out of these discussions that we were able to form the Deep Dish Satellite Network, a collaborative organization of access activists and producers, to share our programming via the commercial satellites. The programs are picked up by public access stations across the country and shown "live" or re-broadcast on local channels.

Most of the programs have been magazine-type shows, each tackling one specific social issue. For example, one program is called *Home Sweet Homefront*. Produced by Louis Messiah, it combines footage on the struggles for housing from many different communities, from Philadelphia, NYC's Lower East Side and Minneapolis, among others. The community video footage is ironically framed with Mumford-esque clips from housing films from the New Deal. The program neatly juxtaposes the homeless activists with the liberal rhetoric from a bygone era. In direct contrast to the decontextualized and atomized way these issues are portrayed in the nightly network news, the local struggles are re-contextualized in this program, and given an additional historical frame of reference. Other Deep Dish shows focus on the farm foreclosure crisis, pesticides, women's issues and racism.

The shows have been popular on local channels, especially with over-worked and under-appreciated access volunteers who see the series as a valorization of the work they do in their communities. Often these groups are isolated and alienated from their local communities. Deep Dish uses the technology to create communities of interest that prove to the video producers and the organizing groups that their work is part of a larger

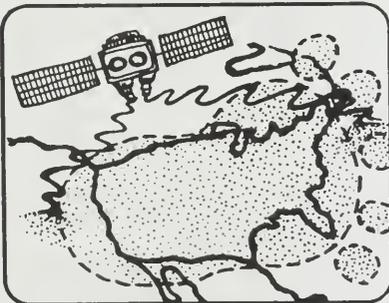
movement. Letters of support to Deep Dish have one phrase that is most often repeated: "Now we know we are not alone."

Deep Dish has also received letters from home satellite owners, a potential audience which now numbers over four million. The majority of dish owners are in isolated rural areas without any other source of television signals. This individual satellite audience has been fully appreciated by Christian broadcasters, who use them for fundraising and for proselytizing to other viewers.

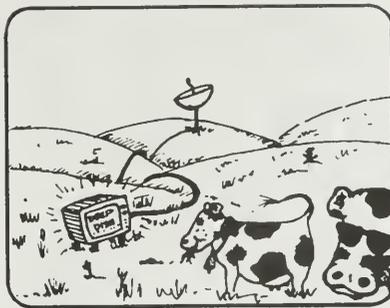


We take 'em to an "Uplink" which beams the program up to a satellite—

The right wing in this country has proved effective in their creation, through media technology of an audience and a community that transcends geographic boundaries with technology. Their early use of direct mail and computer lists was only tardily replicated by environmental and anti-militarist groups. However, in recent years we have seen the successful development of Peacenet, a progressive computer network. Peacenet provides electronic mail and computer data bases in such fields as environmental research, media analysis, Latin American refugee assistance, and anti-nuclear organizing. Many individuals and groups have come to rely on the circuits of data and exchange thereby provided. This network will be an important resource for any future networking possibilities in the video community.

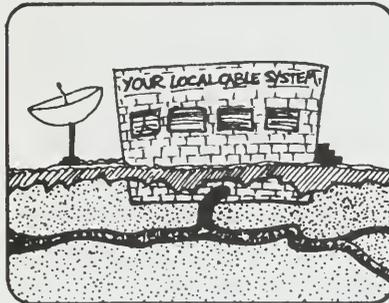


The satellite beams the program back to earth in a pattern called a "Footprint."



Anyone with a satellite dish can receive the Deep Dish programs—

In the process of raising money for the Deep Dish series, I have had to address the question of why the left in the United States has not made use of potentially powerful tools for organizing and distribution of alternative media. Although in recent years there has been increasing willingness to critique mainstream media (The Institute for Media Analysis, and Fairness and Accuracy in Reporting [FAIR] are two organizations dedicated to this purpose.), there has been relatively little activity in the realm of creating alternatives to the official media. Issue after issue has been covered by individual films and videos, but there has been a reluctance to tackle broader distribution schemes.



Public Access Cable Systems send it out to all the subscribers in town—

Deep Dish TV has been working with several other groups to initiate discussions about creating an authentic alternative network: a 24-hour transponder that will be a source for progressive programs and news. It is an uphill struggle. The resistance is not technological, but more ideological and financial. It is easier to get funds for a film about a coal strike than a film about the lies the media are telling about the coal company. It is easier to organize a speaking tour than the circulation of a television series. Unfortunately the right in this country doesn't have these inhibitions.

One of the most interesting uses of video is as self-defense against the police. For years African Americans and Latinos have been victimized by excessive police force. Every year several hundred young men die in police custody or in street struggles with undercover cops. Camcorder video has enabled communities to document these incidents. For years police have video-taped demonstrations and community organizations. But as mass sales of video recorders have increased, harassed communities have taken to watching the police.

The creative use of technology that Mumford dreamed of is alive in hundreds of small studios, in trailer parks, in community-controlled mobile TV vans and in high school rec rooms. It's called public access.

— Dee Dee Halleck



which is how Deep Dish gets to your home—tune in to Deep Dish T.V.— Fearless T.V.!

Deep Dish TV is looking for tapes for its 1992 series which will focus on critical and grassroots responses to the Quincentennial celebrations of Columbus' encounter with the Americas. We are looking for: Indigenous perspectives on the Quincentenary and contemporary struggles for self-determination; protection of land and natural resources; official vs. unofficial histories; local and international perspectives on the relationship between North and South; strategies for survival; performances, teach-ins, direct actions, etc. For more information please contact: **Deep Dish TV** attn: **Programming Director** 339 Lafayette St. New York, NY 10012

tel: (212) 473-8933 fax: (212) 420-8223

DEEP DISH TV. NETWORK

THE FIRST NATIONAL GRASSROOTS SATELLITE NETWORK

WE DON'T GOTTA SHOW YOU NO STINKIN' GENE SCREENS

This interview with Dr. Paul Billings, a specialist in clinical genetics with a Ph.D. in immunology, was conducted in July, 1990 at his office in the California Pacific Hospital in San Francisco by Shelley Diamond and Greg Williamson.

PB: Modern genetics is about 20 years old. We can test now for about 500 medically related disorders that have a genetic component. We have mapped about 2000 human genes on specific chromosomes within each of our cells. We don't really know how many human genes there are, probably about 100,000. So we've mapped about 2%, and in a very short period of time. The curve is growing at an unbelievably quick rate. We'll probably have a very high-quality map of most human genes within about 5 years.

I was a member of a group called "Science for the People," which had a sub-group, "The Genetic Screening Study Group." We were studying sociobiology, the XYY controversy, and intelligence testing issues. We wondered if there was any evidence that genetic testing was being used in a discriminatory fashion, but there wasn't. That was 1987, and I advertised in 1988 to see if people would write me about discrimination.

SD: Could you give us some history of how insurance companies, government and employers have used genetic test results?

PB: Well, each has a different type of history. Insurance companies historically factored out costs over large groups, and the healthy people paid for the sick people. That was the principle of insurance—spreading the risk. A variety of influences, including better testing, certain laws and taxes, and competition, made it fashionable to begin insuring smaller and smaller groups, looking at that group's experience over a period of time in terms of how many medical costs they were incurring, and then, if it was high, rating them as higher risks. That's called "experience rating," rather than "community rating." And that led towards medical assessment of people as they were coming up for insurance.

At about the same time, most people in

the United States started getting their insurance through their workplace. So these forces coalesced to make small businesses and individuals the object of medical underwriting, which is the assessment of health prior to the delivery



If databases contain genetic material, people could learn virtually everything about your genetic make-up. Now that wouldn't tell them much about you, but they may think that they know something about you, and certainly might use that in some way against you.



of health insurance. Insurers solicited doctors' records and began asking people to undergo testing for things like high blood pressure and cholesterol, and HIV. They would also solicit genetic information, even a detailed family history.

The insurance industry has invested in

genetic testing laboratories and companies that assess one's genetic health. Insurers would like more genetic information about their clients, because they could rate people with bad genes higher, and they could "lower" the rates for people with good genes, whatever they might be. They have been kind of cagey about the whole business, but genetic testing suits insurers because they can stratify the population more.

But there is no epidemic of genetic disorders. The number of genetic diseases and the number of people affected with genetic disease is roughly the same as it was a hundred years ago. What we've been able to do over the last 20 years is to detect these disorders much earlier. In fact, we can detect them maybe even years before they become a disorder, so insurers are stratifying people genetically even though their actual genetic disease-related costs have only grown like other medical costs.

SD: So everything that the insurance companies do, as far as requiring tests or getting access to the test information, all of that is legal?

PB: Yeah, because they make your ability to get insurance contingent upon consenting to their seeing that information. Employers are not covered by the same rules as insurers. There's virtually no control over what they can do in the pre-employment setting.

Unions have been a strong force in trying to get employers to act in a reasonable fashion. The 1990 Americans with Disabilities Act says that employers have to offer a job to anyone who's qualified to take that job as long as they don't have a disability which will prevent them from doing the job properly. That could force employers not to do medical underwriting, which they often do for the insurers.

GW: Do you think the recent decision on Johnson Controls in the Supreme Court might have any bearing on this? I mean, this idea that

women who were supposedly more at risk couldn't get some jobs without being sterilized?

PB: I would like people to have as much of their own genetic information as they wish, but I would like to see them retain complete control of it so that they can't be coerced into sharing it. In order to get jobs, in order to get certain kinds of entitlements, people will give up a lot. I would like to see that minimized.

The Johnson Controls Case is in the same ballpark as what we've been talking about. People should make up their own mind if this is an appropriate risk assessment. Employers don't need this information, and shouldn't have it. Employers should be concerned with risks in their workplace — that is, risks that they're creating by exposing workers to toxins, to unsafe practices and equipment—and let the individual decide whether they're at high risk or low risk.

If employers start saying "Everybody with this kind of history — or this kind of genetic test — can't work here," that will be discrimination. Some people in that group *can* and *should* be there, and might be the best for that particular job. So it should be an individual decision.

GW: Why do we test for things that tend to affect blue-collar workers rather than management?

PB: There's another way of looking at that. Companies might be interested in

CITIZENS WHO WORK FOR LARGE CORPORATIONS GENERALLY DON'T HAVE TO GIVE THEIR HEALTH INSURANCE MUCH THOUGHT...



THOSE WHO WORK FOR SMALLER EMPLOYERS PROBABLY HAVE AN HMO PLAN THAT CAN BE SOMEWHAT MORE INCONVENIENT...



THE SELF-EMPLOYED AND UNEMPLOYED MUST EITHER DO WITHOUT INSURANCE ENTIRELY OR FACE THE DAUNTING SEARCH FOR INDIVIDUAL COVERAGE...



THE LUCKY FEW WHO DO FIND AN INSURANCE COMPANY WILLING TO WRITE THEM A POLICY MUST THEN FIND A WAY TO PAY FOR IT...



doing genetic testing to identify those people who they might promote to an executive job, but who might cost them too much in health or life insurance. Someone told me about a vice-president discovered to have a genetic disorder which didn't actually have any impact on his longevity or ability to be productive, who was denied promotion on that basis. But you're right — we see genetic testing used to promote labor-force stratification to reduce the power of blue-collar workers.

SD: One problem is limiting access to employer databases. How do we get a handle on that?

PB: Once you have a database, it's almost impossible to make it secure. The point of attack is to say: 'Why? What right do they have to keep that data in the first place?' Or from the federal government point of view, "What is the public interest in saving this data?" which is, according to law enforcement bureaucracies, detecting crime. If databases contain genetic material, people could learn virtually everything about your genetic make-up. Now that wouldn't tell them much about you, but they may think that they know something about you, and certainly might use that in some way against you.

SD: Could you give us some examples of discrimination? I'm particularly interested in people who were discriminated against for just being at risk versus actually having a disease.

PB: One is the couple who were at risk for having Huntington's disease. And they decided to forego undergoing the DNA test, instead deciding to adopt. They were very nice, made a nice income, a perfect adoption family. When the adoption people asked about family illnesses, they told them about the Huntington's. And that excluded them from the adoption process!

It's classic in clinical genetics to advise people that adoption is a way to avoid transmitting a genetic trait. The wife was in her thirties, and statistical analysis indicates her risk of having the gene for Huntington's when she was born was 50%. But as time goes on and she's unaffected, her risk goes down. If she's passing through her thirties without showing it, there's less chance it's there. So her risk is less than 50%. That's the same as people with family histories of diabetes or cancer, yet they don't exclude people for those.

Then there are neuromuscular disorders, which are highly variable in the people who have it. Some people in the



graphic: D. Minkler

ATMOS - FEAR

Psychological Experiments on Women Prisoners
Lexington, Kentucky, USA, 1987

Sensory deprivation coupled with social isolation destroys the personality. This constitutes inhuman treatment which cannot be justified by the requirements of security. Shut Down Lexington Control Unit.

family might be wheelchair-bound, while others wouldn't even be affected, and you'd need a DNA test to detect it. There was one case in which someone went in with a parent who showed it. Specialized testing revealed that the child had it, too. The child applied for a job and was turned down because she admitted to a positive test for the disorder. But she was perfectly fine, and in fact, a severe case wouldn't even affect her ability to do the job.

Or take the case of the salesman who had been driving for 20 years with a neuromuscular disease without an accident, a ticket, or any change in his illness. This guy had the gene, and a mild physical manifestation, but he wasn't ill. He wasn't complaining, he wasn't using extra medical care, he wasn't taking medicine for it. His car insurance agent found out about it through an application for life insurance, and canceled his auto insurance, so he couldn't make his living. The man's doctor sent a letter to the insurance agent, saying this guy is perfectly healthy, a perfectly good driver, but it had no effect.

Then there are cases in which someone is identified as a carrier for a recessive disorder through the diagnosis of the full-blown condition (say, cystic fibrosis), in a nephew or a relative, and their *carrier status* is used as a reason not to insure them.

SD: So what is someone's alternative when they feel they've been



graphic: Mari Bianca

discriminated against? Is a lawsuit the only answer?

PB: It depends. If it's an insurance issue, people who have persisted have sometimes gotten satisfaction from the appeal process. They go many months without insurance during this process, but people can win. You have to be a very good self-advocate, speak English, and have enough money to persist. You can't be afraid to embarrass yourself at work, or worse, risk your job. If you're able to do all that you'll probably get satisfaction from the system. And, of course, there are lawyers who'd like to argue these issues in court. The system is stacked against you, and you have to be able to fight it, and that's hard.

SD: Do you anticipate a precedent-setting case in the courts?

PB: I don't know. I don't think there's any evidence that that's how things change in our society [laughs]. You have to change people's attitudes through education.

I think the health insurance issue is clear-cut. I don't think we need to research the idea that people should have access to health care in this country, and they should be able to stay financially solvent while getting it. You may need to research the best way of changing this inequitable system into an equitable one. I would rather have people know that genetics doesn't tell you very much about how someone is going to use the medical care system, or how good an employee they're going to be.

SD: Is it the job of the human geneticists to take on this kind of educational role? Should business be required to consult with human geneticists before

they make policy?

PB: Yes, and I've actually heard about a number of wonderful new programs where clinical geneticists, even those with disabilities, are conducting corporate programs, demystifying genetic disorders as employment criteria or indicators of high insurance risk.

That also presupposes that human geneticists can give a responsible account of their own discipline's history, both its applications and its limitations. Many genetic scientists *don't* know the history. These guys — like me — are lab rats who never see the light of day, and really don't know what the problems are. They just do their experiments and write their grants, which are hyped versions of their work's importance and how it's going to transform society. Look at the rhetoric around the Human Genome Project — "the holy grail, the essence of humanity, every illness is genetic." It's a skewed and narrow way of looking at the problems.

We have to re-educate the human geneticists — or at least *historically* educate the human geneticists, as well as the public at large. Human geneticists have to be in the vanguard of teaching the limited applicability of human genetic information in making social decisions.

SD: What about eugenics?

PB: Ideas about genetics start out positive and hopeful — liberation from the curse of one's parents, new treatments for disorders, new freedom to make choices. But then questions of control and determinism appear. What are we going to pass on to our children?

The history of genetics in the U.S. is just full of eugenics — from forced sterilizations and the Immigration Acts, to sickle-cell screening programs, to new calls for population and immigration controls.

GW: Issues of crime and heredity?

PB: Crime and heredity is a very good example of applying genetic explanations to social problems. If the link is accepted, it implies the *elimination* of the people who are genetically susceptible to one thing or another — and that's eugenics.

If you look at other cultures, it's even more profound. I don't think that genetics *necessarily* has to be that way. It has to do with the way people learn about genetics, with psychology, with inherently racist societies. Popular genetic science tends to reinforce ethnic and racial stereotyping. My hypothesis is that if we could find societies which are relatively free from racism and sexism



graphic: D. Minkler

CORPORATE

corporate (côr'pôr-ate) *adj.* from the french cœur, heart (sounds like cur-mongrel dog, base person) porate, from the Latin, flow of excrement (pour-rate) through the Roman aqueduct system.
corporate: Heart of flowing shit.
 Definition and translation provided by Amir Passman and Doug Minkler

and other forms of stereotyping, they may be less likely to abuse and more likely to intelligently use genetic information.

GW: In *Backdoor to Eugenics*, Troy Duster compares what's seen as a legitimate genetic question in Denmark or Scotland—which are very racially homogeneous—and what's seen as a legitimate question in more racially-mixed countries, like the U.S.

PB: Yeah, well, I think it can run either way, right? I just took care of a Vietnamese kid who has Down's Syndrome, and his family had never noticed! I attribute that to fairly homogeneous societies — it either has to be so shocking, so different that they just say "it's different" (and probably discriminate against it), or they assume it's part of the homogeneity of the group. Our society is

economically and politically stratified. The genes of the lower ranks are thought to be less desirable than genes of the higher ranks.

SD: How are people reacting to possible and real discrimination? Are people lying or refusing to be tested?

PB: I'm to some extent pleased that many people who would potentially "benefit" from a new test are declining it. One of the reasons is that they have a sense that discrimination will follow. They also don't want the information for other personal reasons; that's their business. Many people will decline to have the test for Huntington's or cystic fibrosis if they're given the option.

Other people who have genetic information about themselves will lie about it. Some insurance agents will encourage people to lie because they know honesty



photo: D.S. Black

will lead to denial of coverage. Physicians will obfuscate this material in medical records and billing so that insurance companies don't get it, because many physicians — quite correctly — want to protect their patients.

SD: Would that impair later treatment?

PB: If that information weren't readily available and the patient were having an acute something-or-other, yes, that could be a problem.

SD: Have you heard of people who are forced to stay in jobs for insurance?

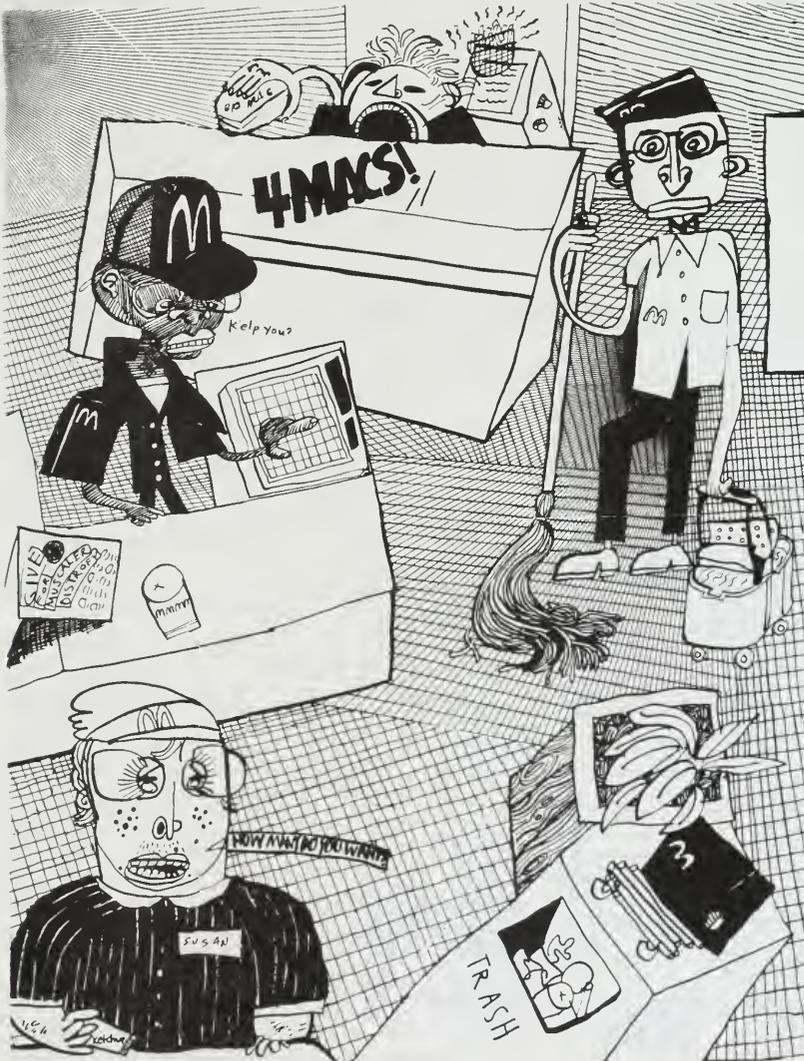
PB: Well, not exactly. I've heard many people take it into consideration, and I'd encourage that. If you're considering undergoing genetic testing for anything, you should take care of any job and insurance issues *before* you do it. And you should be aware that insurance companies may not want to pay for it, or they'll make insurance contingent upon you paying for it.

SD: What do you know about the bill introduced in the House of Representatives?

PB: The Genome Privacy Act protects one's right to find out what genetic information is being held by an agency, to rectify it, and to sue if it's being abused. It's an interesting starting point. I like the civil rights model better than the consumer credit model, which doesn't get at the issue of why companies should have any right to store the information in the first place. I was listed as one of the act's sponsors, but I think it's flawed. I hope that the discussion heads more towards "rights."

GW: Do you see any roadblocks to a darker use of genetics—forcing people's decisions rather than informing them?

PB: There'll be a group that'll say we





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should look at high susceptibility and low susceptibility individuals, and people who are highly susceptible and act irresponsibly should not have access to care or should pay more for it. It's like, "if you smoke, you can't have health insurance" — or if you have a "bad gene" and you act irresponsibly, you should be punished. I don't think it's right, but I can see that happening.

GW: There seems to be an unhealthy fascination with technique, and little consideration of the implications. Or is that just a reflection of what gets published?

PB: No, I think you're quite right. I think genetics is a "gee whiz" kind of science. No one anticipated that it would get so detailed, sophisticated, and miraculous so quickly. People just don't talk about the limitations. No one ever said that basic scientists could understand the problems of society. These are narrow, focused, ambitious guys. There's no reason to want them to be leading our society.

GW: The people who are pushing for a genetic explanation of complex behaviors — alcoholism, mental retardation, crime — are often people who aren't geneticists.

PB: Yeah that's true. Troy Duster actually has some nice data on that.

GW: What would you be doing if you had control over, say, National Science Foundation funding?

PB: That's a good question. Well, I would apply it to the common disorders. That's a reasonable application of genetics, because we don't have a clue about the etiology of many common disorders. We know that environmental factors are

involved, but I think that that should be equally — or more — funded, since we already know certain risk factors.

I don't think it's inappropriate to apply genetics to any and all questions. At the same time you have to acknowledge the limitations of the insight that you're going to get. And if you find a genetic link to cancer, or a genetic link

to heart disease, or even to mental disorders, it's only the first step in trying to describe a system which is extremely complex. Genetic information may be an important step, or it may be a totally irrelevant step. It's right to study things that affect a lot of people and cause a lot of misery. So that's what I'd do.

GW: Our last issue looked at "The Good Job," and we had a lot of people who were leftists, or at least liberals, who drifted into jobs that had pretensions in that direction — the ACLU, labor unions, co-operatives, etc. Do you have a good job? And if so, why?

PB: The only good part about my job is that I teach. Education is a very big part of this. I sit around with people like you, and do a lot of TV and other stuff, because I think it's a modern form of public education. And I do research, which has a "morally redeemable" side to it. But I work in the private medical world, and my salary is paid out of the profits of a private medical institution, so in that case I suppose I am a representative of a system which is in fact disordered, and causing people problems.

If you feel you've been genetically discriminated against, please contact:

Dr. Paul Billings, M.D., Ph.D., Dept. of Medicine, California Pacific Medical Center
P.O. Box 7999, San Francisco, CA 94120, or call (415) 923-3575.

THIS MODERN WORLD by TOM TOMORROW

HEY, CITIZENS! IT'S TIME FOR YET ANOTHER EDITION OF "HOW THE NEWS WORKS"...

STEP ONE: THE PRESIDENT DESCRIBES, IN VAGUE AND GENERAL TERMS, THE BENEFITS OF A FREE TRADE AGREEMENT WITH MEXICO.

FREE ENTERPRISE!
GROWTH! BLAH!
BLAH! BLAH!



STEP TWO: AN ECONOMIST IS TROTTED OUT TO EXPLAIN HOW THROWING THOUSANDS OF PEOPLE OUT OF WORK WILL BE GOOD FOR THE ECONOMY.

YOU SEE, ONCE BUSINESSES ARE FREE TO MOVE OPERATIONS TO MEXICO...



...THEY WILL NO LONGER BE FORCED TO PAY EXHIBITANT WAGES TO AMERICAN WORKERS! CORPORATE PROFITS WILL SOAR! THE ECONOMY WILL TURN AROUND! THE RECESSION WILL END!



STEP THREE: POSSIBLY-- JUST POSSIBLY-- A REPORTER WILL ASK THE OBVIOUS QUESTION...

...BUT--WHAT WILL HAPPEN TO ALL THE WORKERS WHO LOSE THEIR JOBS?

OH, NO PROBLEM--THEY'LL BE RETRAINED!



STEP FOUR: DOUBTS THUS ASSUAGED BY GLIB REASSURANCES, THE MAINSTREAM NEWS MEDIA FALLS DUTIFULLY INTO LINE...

...AND AFTER ALL--WHAT'S GOOD FOR BUSINESS IS GOOD FOR AMERICA!



STEP FIVE: THE PRESIDENT EVENTUALLY GETS HIS WAY. DISPLACED WORKERS ARE RETRAINED AND SETTLE INTO FULFILLING NEW CAREERS.

YOU WANT FRIES WITH THAT?



SHADOWBOXING THE FUTURE

Roger Salquist is a model of the enlightened manager of the new "clean" industries clustered around California's university towns. In a meeting with activists, he and his staff dress in jeans and sneakers. They look more like environmentalists than the environmentalists, who show up in suits and ties. Salquist, a former nuclear submarine engineer who once ran a solar energy company, is president and owner of Calgene, a Davis, California-based biotechnology company. Avoiding the inflated claims of a new industrial revolution, he comments that "[o]ur influence will be fairly opaque to the customer. . . It's not a revolution, but an evolution."

This slow entry into the economy may well be a major obstacle to mobilizing interest in biotechnology. Proponents promise the public cures for cancer and a solution to hazardous waste, while critics focus on the potential for major disasters. Neither has come to pass. The increasing use of biotech products will accelerate existing patterns; the development of herbicide tolerant plants will probably increase the use of dangerous agricultural chemicals. Biosynthetic human growth hormone may help people afflicted with dwarfism, but the product is being increasingly used on children whose parents would like them taller, or by athletes looking for an untraceable alternative to steroids.

The University-Industrial Complex

Most biotech firms settle near universities because both the means of production and the end product (the information on the sequence of bases in genes) originates there. Grad students' training is publicly funded, and they work cheap.

Significant work in university labs is done under contract with private interests. Calgene was founded when a professor at UC Davis received a research grant from a chemical company which was also an investor. As tenure becomes harder to obtain at strapped public universities, students are realizing that biotechnology is the field to get into and Calgene is the place to work.

In the race for the golden double helix,

knowledge is a commodity, patentable and ownable by the giant multinationals. The courts recently held that UC had the right to license and sell the reproduced cells of a former patient without compensating him. Already

Yet to be discovered is what happens when bio-engineered lifeforms reach the market and get dumped into the air, water and soil in massive quantities. Unlike toxics, some of them will be capable of reproducing and spreading.

breakthroughs and developments that might have been publicly shared in a collegial spirit are being disclosed to stockholders first, if at all.

Yet there is still little campus debate about the direction of biotech research and ownership of the fruits of years of publicly subsidized brain-work. A notable exception is Farmers for Alternative Agricultural Research, a fledgling coalition of farm reform groups pressuring UC over research priorities that favor pesticide companies.

How do Critics Organize?

Organizing around obvious disasters like Love Canal or Chernobyl left social critics of technology without clear-cut ways to address emerging issues and the public numb to subtle shifts whose impacts are still years away.

Based on 50 years' experience with the chemical industry, our record of predicting the effects of new technologies is not very good. Chemical processes are so ingrained in our economic life that we no longer depend on mechanical force and the application of heat to produce goods. Many suggest that the next production mode will rely on biological forces.

This shift is already under way. California is home to almost a third of the world's new microbiology and genetic industries, and most of them are still developing and testing — manufacturing is still in the future. As a result, biotech may be one of the first technologies we can examine *before* it takes hold in the market.

We've already witnessed the mobilization of public opinion against Advanced Genetic Sciences' (AGS) proposed release of a bacteria edited to prevent frost blight when sprayed on crops. The bacteria promised to save farmers millions in crop losses, but its greatest consequence would be to allow cold-sensitive crops to grow in colder climates, possibly placing untrammelled habitat (read "unproductive wasteland") under the plow.

The Foundation on Environmental Trends led a lengthy battle against researchers' plans to test the engineered bug's field performance. The Foundation raised a variety of concerns and argued in court and the press for an Environmental Impact Report (EIR). Some scientific critics even suggested that the bug's genetic changes might be shared with wild relatives, disrupting global weather. Most focused on micro-impacts which are hard to prove or disprove. The press was fascinated by the conflict between scientists and critics, and the potential for extreme disaster.

The initial test site was in Monterey County, with subsequent tests slated for remote Modoc County, near the Oregon border. Local farmers mobilized in opposition to the release at the original site, and Monterey County adopted ordinances that required a permit and a full EIR. The delay and public review discouraged testing, and AGS shifted to a more politically apathetic area in the agricultural San Joaquin Valley. Bay Area green advocates failed to develop the grassroots support they had around the coastal test site, and the company, with the support of UC, organized its own outreach. There were more delays as legal wrangles continued, and when those failed, vandals ravaged the site. The test was conducted anyway, the AGS product turned out to be worthless, and global weather patterns have remained stable (well, it has been hot lately in Sacramento). [See also letter in PW 20 from anonymous group who attacked similar test in 1987.]

The number of these tests is increasing daily. Yet to be discovered is what happens when bioengineered lifeforms reach the market and get dumped into the air, water and soil in massive quantities? Unlike toxics, some of them will be capable of reproducing and spreading.

Several neighborhoods have waged fights against biotech facilities. In San Francisco, residents near the UCSF medical school have successfully challenged plans to expand biotech labs which, according to the opposition, would have housed Navy bio-warfare research. In New York, Harlemites have fought Columbia University's plan to tear down the Avalon Ballroom (scene of Malcolm X's assassination) for a new biological research and development complex.

Crack For Cows

Another major projected product of the biotech industry is a pharmaceutical drug for dairy cattle called bovine growth hormone (BGH — also known as BST). Cows produce the hormone themselves to regulate milk production. More BGH, more milk. So Dow-Elanco, American Cynamid, Upjohn and Monsanto engineered a bacterium to create it.

The problem is that there's already too much milk. Increased milk production through a costly input that demands additional management would drive smaller producers out of an already

marginal industry, and encourage larger herds and concentration in ownership. And consumers are leery of food tampering.

The campaign against BGH has focused on these constituencies. Regional coalitions have asked major dairy processors to pledge they won't purchase BGH milk. While the biosynthetic hormone is not licensed for general use, milk from test herds is sold in secret. In California, where distributors required dairies to certify that no milk from test cows was entering the food supply, milk was sold instead to federal food giveaway programs. Since 40% of all dairy cows eventually end up as hamburger, it is possible that some meat from experimental animals also ended up as McBGH burgers.

The manufacturers of the drug have reportedly spent almost \$250 million just in development. Some sources have estimated that annual sales could reach \$2.5 billion. Given these stakes, the fight to bring the product to market will be fierce. The federal Food & Drug Administration (FDA), which favors wide use of the hormone, has been charged with covering up documented increases in rates of illness in BGH test animals. Opponents of BGH organized a national consumer boycott, complete with television spots (one featured a hypodermic syringe in a glass of milk). A comprehensive report detailing the economic, animal, and human health issues was released by Consumers Union, and the FDA postponed its decision on the drug for another year.

Although the product has been a black eye for the industry, BGH has not slowed another biosynthetic product from widespread use in the dairy industry. Chymosin, a synthetic form of rennet, used in cheesemaking, had a 35% market share by mid-1990.

Antebellum Redux

Despite the need to challenge this new industry, movement building will be difficult. Many effects of biotech will be economic, and the labor movement has, for the most part, lost the ability to organize around economic issues. The victims of biotech are isolated and frequently unaware of the sources of their injury. The industry is a phantom, still more talk than product. The few pharmaceutical products produced by bioengineering are expensive and limited in their use.

The nature of the industry's intentions are clear. When asked about his vision for agriculture, Roger Salquist argues that saving family farms is irrational. "Nobody did anything to save independent record stores or groceries or service stations or all the other extinct vestiges of post-Industrial Revolution America." Despite years of rhetoric about preserving America's rural base, biotech policy ensures that smallholders in the US will go the way of the formerly self-reliant victims of Dole and United Fruit in the Philippines and Central America. The corporate biotech vision of enormous plantations growing patented seeds may soon spring to life.

—Sam Bulova



Regicide

We have perfected the anti-monarchical genetic bullet. A small pellet dissolved in bovine-growth-hormone-rich milk before bed, and *that's it!*

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Graphic: C.C.

GENERATION OF SLACKERS

Generation X: tales for an accelerated culture

by Douglas Coupland

St. Martin's Press, 1991. \$12.95

with some additional comments on the films of Hal Hartley, and others

As a soon-to-be post-twentynothing, I read *Generation X* with a great deal of interest. I'm tired of people telling me what I'm supposed to be, or more often these days, what I am not. I've lived for years in the taciturn shadows of the sixties, being a sort of Type A "slacker," with thinly concealed disrespect and distaste for the world I've inherited, lacking faith, hope, and yes, charity towards my elders, who by virtue of the temporal roulette, expect my obisance.

Age is relative. "If you remember the sixties, you weren't there," runs a current refrain. I remember them only too well, even if I had little to say at the time—who would listen?

Suffering the terminal wanderlust of the first jet-set generation, with beat/hippie forebears, we're always looking for that virgin runway to escape the soul-jangling chords of expatriate solipsism. In moments of incendiary madness, I'd just as soon we burn the whole shooting match of this modern world (not you, Tom!) down to the ground, and start over with a charred slate. Is it an atavistic memory, a sympathy for the dinosaurs, that feeds our fascination for their catastrophic extinction?

We have been an invisible generation. *Time Magazine* calls us "freshly minted grownups." Coming at the tail-end of the baby boom—sometimes we call ourselves the "baby doomers"—now, turning thirty, we reveal ourselves in movies like *Slacker*, any of Atom Egoyan's films (*Speaking Parts*, *Family Viewing*), or Hal Hartley's (*Trust*, *The Unbelievable Truth*). Now we've found a literary voice in Douglas Coupland's *Generation X*—a book that says something about who we are. It plunges into the desert of our age, and comes back with a searing portrait of the mirror at midnight, melting in the nuclear shadows.

Its author is tersely described as "from British Columbia, Canada." Just finding his book in a bookstore can be a challenge. It measures 8 by 9 inches, and, defying categorization, is as likely to be shelved in the aging, art or anthropology sections, as it is in fiction.



Generation X concerns three twenty-something opt-outs who live in adjacent bungalows in Palm Springs, California. They each work "McJobs" in various service industries, having abandoned the "veal-fattening pens" of their hometowns of L.A., Portland and Toronto.

"Where you're from feels sort of irrelevant these days," muses the narrator, "since everyone has the same stores in their mini-malls."

Claire, Dag, and Andrew instead choose to "live small lives on the periphery; we are marginalized and there's a great deal in which we choose not to participate. We wanted silence and we have that silence now... Our systems had stopped working, jammed with the odor of copy machines, white out, the smell of bond paper, and the endless stress of pointless jobs done grudgingly to little applause."

On the surface, they treat each other antiseptically—it is, after all, a desert they're in. Their intimacy is a common exile in the "platonic shadow" in which they spin parables around nuclear epiphanies, musical hairsplitting, telling each other urban folktales late into their TV-dead nights.

These are the notes of a "Basement People" who just can't shake the sense of being marginalized by the Boomers who came before them. Their fears and observations are reflected in chapter headings: *The Sun is Your Enemy...Our Parents Had More...I Am Not a Target Market...Dead at 30 Buried at 70...New Zealand Gets Nuked, Too...Don't Eat Yourself...Eat Your Parents...Purchased Experiences Don't Count.*

One of the pleasures of this book is the hyper *au courant* wordsmithing and phrasemaking the author highlights in the left and right columns, *quels bons fucking mots* which I use to pepper this review. It's a *Devil's Dictionary* for the nineties, with terms like decade blending, bread and circuits, rebellion postponement, consensus terrorism and terminal wanderlust to explain our restlessness. Some who are condemned to sweat out most if not all of their adult lives in the years *after* 1984, are going to suffer from option paralysis ("the tendency, when given unlimited choices, to make none"). They're not alone.

The book flashes forward to the year 2000, to a blinking high contrast spin through "America's Winter Garden" where a "cocaine white egret" soars over the carbonized dry silk of a slash-and-burned field. The reader is left with a persuasive though glib effluvium of numbers for endnotes, a sort of *Harper's Index* for the *Vexed* with citations from the *Time* article, and other reputable purveyors of high precision factoids.

Close to sixty percent of the twenty-somethings *Time* talked to believe "There is no point in staying at a job unless you are completely satisfied." Even more assume that "Given the way things are, it will be much harder for people in my generation to live as comfortably as previous generations." Suburban angst, maybe.

But after nearly a decade of Bratpack writers like Bret Easton Ellis and Tama Janowitz giving North American letters a fetid air of mediocrity, it's refreshing to find a young writer who does not substitute designer names for imagina-

tion. Rather than mouthing inanities through a crash-dive of delirium, eyes locked on a myopic monitor, we see characters many of us might recognize as the TV-emprised latchkey kids of the suburban living room, grown up now and groping for ways and means out of this nightmare known as the New World Order.

Of course, we still face terra incognita—the X-niks are only now starting to define themselves, to express their post-modern if premillennial malaise. “The world is a dangerous and uncertain place,” says the protagonist of Hal Hartley’s short film *Ambition*. In *Trust*, Martin Donovan groans, “I gotta go see this jerk about a job.” Or, in *Theory of Achievement*, Bob Gosse quips, “I’m bad at my job on purpose. If I was any better at it, I might become what I do for a living.”

Diagnosing ills has always been easier than prescribing a cure, yet to ignore today is to blindsight tomorrow. If hindsight is 20/20, the future may be cataracts. Reading books like *Generation X* is a good way to go before the sky dims.

—D.S. Black

The City, Not Long After

by Pat Murphy

Bantam Spectra Books, 1990. \$4.50

This surrealist speculative fiction novel struck my fancy because its premise is a radically depopulated city of San Francisco sometime in the not too distant future. The people have been killed; in fact, most people in the developed world have died from an airborne virus carried by Peace Monkeys imported from the mountains of Nepal.

This epidemic is the ironic result of a worldwide campaign by peace activists to put an old prophecy to the test, to see if the monkeys could truly bring peace. They got more than they bargained for when within a few short months hundreds of millions perished from the new plague, passed from one primate to another.

San Francisco’s survivors are a hardy 150 or so, mostly poets, conceptual artists, and peculiarly innocent people, along with a cast of unknown dozens of ghosts, spirits and the city of San Francisco itself. The City manages to direct its inhabitants where they need to go through its ever-shifting layout.

This arty collection of slackers and survivors is menaced by the imminent invasion of a loony right-wing America First militarist who has already built a

BREAD AND CIRCUITS:

The electronic era tendency to view party politics as corny—no longer relevant or meaningful or useful to modern societal issues, and in many cases dangerous.

CRYPTOTECHNO-

PHOBIA: The secret belief that technology is more of a menace than a boon.

TERMINAL

WANDERLUST: A condition common to people of transient middle-class upbringings. Unable to feel rooted in any one environment, they move continually in the hopes of finding an idealized sense of community in the next location.

VIRGIN RUNWAY: A

travel destination chosen in the hopes that no one else has chosen it.

small empire and subjugated most of California’s Central Valley. He is intent on bringing San Francisco into his fold of upright Americanism. The surrealists, iconoclasts, traders, and doodlers of SF embark on a house of mirrors (and ghosts) defense of their beloved City.

Pat Murphy does a nice job of evoking an empty city, the scavenging lifestyle available to the few survivors, and weaves in various magical realist elements as well. What I found disappointing, in spite of my basic enjoyment of the book, was that once again an interesting premise of a radically different society is constrained by its arrival through unprecedented catastrophe. The essential questions of work and wealth are avoided by having a very few people living in perpetuity from the rubble of the old world. I want to read books about a new world where exciting urban living is combined with a radically changed organization of life. Oh well. Maybe the next one!

—Chris Carlsson

MONDO REALITY HIGH

Mondo 2000 ◀ Reality Hackers ◀ High Frontiers

P.O. Box 10171, Berkeley, CA 94709
\$24/5 issues; \$5.95 single issue

Let’s get virtual, baby. Snap on your DataSuit; put your clips on...my earlobe. What, you’re not in the mood for some teledildonics? Then let’s get meta-

physical. With Brian Eno! Timothy Leary! Kathy Acker! William S. Burroughs! Robert Anton Wilson! Come ride the electronic frontier! Gather round the cathode ray campfire for some High Definition weenies. The penumbra haloes you see are a harmless side effect of the smart drugs—breakfast of reality hackers!

If this tachycardiac intro betrays a certain breathlessness, then you can imagine the excitement I feel with the arrival of each new issue of *Mondo 2000*, hotbed for these and other screaming memes aflame in the neuroelectric firestorm of these neophilic nineties. *Mondo* is a feast of up-to-the-nanosecond intelligence—the news from the crackling synaptic bonfire of late 20th century technovanities.

When I want to know more about “cyberpunk ... the attitude ... where to get it,” I reach for *Mondo*. When the urge hits me to hook a MIDI innerface to the old PC, or to check out the latest in pornographic software (“The Carpal Tunnel of Love”), this is the place for all the down and dirty, the sacred and profane in this age of silicon and cellular automata.

What I like about *Mondo* is its funkiness. For look and feel, *Mondo* (or M2, as it tags itself) has some of the busiest, and if you’re into that MacClutter of graphic devices, some of the *bitchinest* bytes to come down the digital pike. It should only be a matter of time before a mindblowing blipvert edition of this mag is available, or maybe even some daring new optical blotter format for the real wireheads. As writer (and Grateful Dead lyricist) John Perry Barlow remarks on virtual reality in the summer 1990 issue (no.2), “cyberspace is already crawling with delighted acid heads.”

Riffling through some old issues, its earlier incarnations, one flashes back to panegyrics to MDMA (Ecstasy) and other stylish designer drugs of the mid-eighties. For my taste, there have been a few too many cloying, credulous and seemingly unedited interviews with Timothy Leary, John Lilly, Ram Dass, and other *eminences grises* of the psychedelic frontier. One can turn to the new issue of M2 (no.4) and find...yet another cloying, sycophantic interview with Timothy Leary and William Burroughs (“A Couple of Bohos Shooting the Breeze”).

There is the occasional serious, provocative, and informational piece, however—as in issue 3’s “Civilizing the Electronic Frontier,” which describes the

assault on civil liberties now being mounted by the State on computer users (and yes, the occasional abuser).

But for every one of these hard-hitting features, there are several which are charitably described as fluff—Dominateditrix Queen Mu's exculpation of Jim Morrison comes readily to mind. Here she raises shield and sword to defend him against the depredations to his legend by Oliver Stone's movie *The Doors*. Although I like Baudelaire and Lautrèmont—both of whom Queen Mu brings into the discussion—and will only too willingly concede the Doors' singer's role as an orphic character, it's still hard not to smile at Mu's drooling deconstructive exposé, the tarantula venom irony of Jim Morrison's penile karma.

This article might not have been so embarrassing if it hadn't covered seven pages of the new issue. Must be hard to edit a Domeditrix.

That's not the only lapse. Rudy Ruckler's incoherent review of *The Difference Engine* (William Gibson and Bruce Sterling's new novel), and Barbara Leary's star-fucking necrophiliac piece on Andy Warhol give M2 its soft-centeredness, or high squish quotient. For fringe science watchers, there is even an article on *slime*—an important substance for our time.

If it's not the *Interview Magazine*, then perhaps *Mondo* is a hybrid of *Whole Earth Review* and *Rolling Stone* for the cyberscene. I remember its first issue as *High Frontiers*, when it appeared in 1984: a folded-over tabloid, nominally going for a dollar, though it was on the freebie tables of most stores that carried it in the Bay Area. That was the nice price.

This "Space Age Newspaper of Psychedelics, Science, Human Potential & Modern Art" was part of a quasi-New Age utopian movement which promised to blaze a way for those of us afflicted by the "outward urge" to slip the bonds of gravity, whether astrally or through psychedelia.

Soon, to reflect the conscious evolution towards new outlaw technologies, *High Frontiers* became *Reality Hackers*, which later begat *Mondo 2000*. Along the way, it has remained hip and compulsively readable—it's always interesting to check in with Brian Eno, and some other people like Avital Ronell (author of *The Phone Book*) who receive notice.

Ian Shoales contributes a characteristically amusing, acerbic commentary "War is Hell, Peace is Heck" to the new issue. By way of contrast, the lead

editorial by the aptly named R.U. Sirius describes how the "New World Disorder... starts within yourself... when you realize that safe sex is boring sex, cheap thrills are fun and you're as atavistic as they are... This ain't no reasoned debate. This is Jehova against Dionysus. Let's drink that tired old self-righteous motherfucker under the table." Again, shades of Baudelaire ("Get Drunk!"), only that was then... this is now; I'm surprised Sirius doesn't urge all cybersamurai to take their grievances to the street, or where it would really hurt, the Net.

Indeed, times like these are screwy enough to drive any thinking or feeling person to extremes. For every new paradigm, there ought to be a new panacea. But I can't help wondering if all the hype over virtual reality and other technology-based alternate universes that *Mondo* touts for their emancipatory potential aren't just, in the final analysis, a marketing ploy for the wetdream consumer goodies that will surely follow. The ads they publish do nothing to allay this concern—"Get High on Oxygen! Take a Quantum Leap into Higher Consciousness with Activated Oxygen—The Ultimate Smart Pill."

In the case of virtual reality (VR), it certainly would be useful to have RISC-based access to computer-simulated environments where the interface is discrete, if not transparent, and bandwidth (i.e. range) is constrained only by the imagination. Impulses in this electronic realm could be seamlessly melded with one's perceptual apparatus, opening a new romantic frontier—in the mold of William Gibson's seminal novel, *Neuromancer*. VR creates an alternate reality that is like television, only potentially more rewarding as it is interactive, with full user immersion. The possibilities are immense: in issue 2 (Summer 1990), the laundry list of applications includes "working bodies for the damaged," "datacondoms" and "travel to alien worlds."

On the other hand, those of us plugged in, in the early part of this year, had the grim spectacle of smartweapon pyrotechnics in the war with Iraq. Turning to the glass oracle of television, viewers found themselves in a virtual cockpit over Baghdad. Ian Shoales, in his sarcastic piece, talks about some "Lessons from the Mother of All Post-war Periods"—how it would have been cheaper to throw money at Iraq to end the war rather than all those expensive hi-tech weapons.

Yet *Mondo* is so enamored of the gee-whizbang neatness, the goshwow sense of wonder inspired by such technical "innovations" as virtual reality—the understandable dream of finding a universe in a grain of silicon—that I often wonder if they're not showing just a little unseemly haste to leave this stinkin' cesspit of a world behind their television snow and mirror shades.

—D.S. Black



"LEADED GAS"

Science as Culture

Free Association Books,
26 Freegrove Rd.,
London, N7 9RQ, England
20 pounds sterling/4 issues; \$5.95 each

Science As Culture, formerly *Radical Science Journal*, examines the role of science in society. In the past they have dealt with topics as diverse as labor relations ("Post-Fordism" in issue #8); women's issues—female infanticide in India (pilot issue) and women as scientists (#4); and science fiction (#2 and #5). The articles are for the most part well grounded, only occasionally lapsing into academes.

A recent issue (#9) has an article that is particularly germane to this issue of *PW*: "The Double Helix as Icon," by Greg Myers. The topic is not the science of genetics, but rather its *representation*. The reason for wanting to analyze this imagery "... is not that the images carry cultural significances into science; historians have often shown that science is already built on culturally given models. The problem is that they superimpose various significances in a way that makes them seem naturally related, so that we come to trace social values and struc-

tures to nature, rather than tracing the metaphors of nature to their social origin."

Among the meanings that he examines are: creation-images of the origin of life, etc.; individual identity and genetic determinism—"am I just my genes?"; and biotechnology as a commodity. He gives examples by both picture and description, mostly from magazines that cover scientific issues for the non-specialist.

To better study the imagery of science he identifies three aspects of representation: the *icon*, in which there is some resemblance between the object and the representation (the sun represented as a circle with rays); the *index*, in which the representation is produced indirectly by the thing represented (such as a shadow); and the *symbol*, in which the relation between the signifier and the object is strictly arbitrary (such as the letter "A" representing the amino acid Adenine). He looks at other aspects of imagery which affect response, such as gratuitous detail, which may serve to make an image seem more real, or allow it to convey other meanings (such as using images to confirm the complexity of science, etc.). The use of several images together serves to amplify the effect of presenting an indisputable reality, and each image borrows from an existing cultural context which provides an "emotional" flavor (e.g., use of biblical imagery—trees and snakes, for instance, or the imagery of Frankenstein).

One section examines the "cross-breeding" of images pertaining to science. In a discussion on the astronautic metaphors invoked in articles and advertisements, he makes an excellent point: "... all this spaceship imagery... makes science a matter of technique, not a matter of changing concepts, of research styles and collaboration, or interaction between specialties. As often happens in popularizations, technology stands in for science, partly because technology is more photogenic."

He also looks at the "genetics as a book" metaphor, which comes complete with the implication that we find meaning, rather than make it. He closes by pointing out that people do make their own meanings from this imagery. For some, the imagery that sells genetic material as an assembly-line product may be repulsive; far from convincing them that this is a good idea, it may galvanize them into action against the process. "[W]e have little control over

the images of science that enter popular culture, but we may be able to rewrite the captions."

—Primitivo Morales

Woman Sitting At The Machine, Thinking

by Karen Brodine
Seattle: Red Letter Press, 1990. \$8.95

*I know that typesetters
grow more capillaries
in our fingertips
from all that use.*

*here's a test: cut my fingers
and see if I bleed more.*

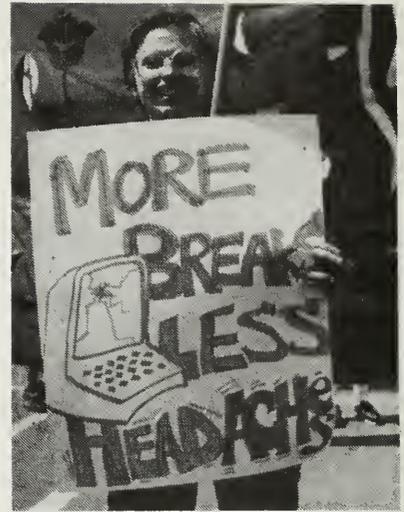
Woman Sitting at the Machine, Thinking, is Karen Brodine's fourth and last book of poetry, published posthumously by Red Letter Press. Karen was an active social feminist who worked for many years as a typesetter. Most of the poems encompass her political views not only on larger, social issues, but attempt also to gain poetic insight into the "minuteness" of her everyday life. Other poems reflect her experiences as a daughter and granddaughter, a lesbian, and a victim of cancer.

The title poem (quoted above) is a series of work pieces which analyze the internal exploitation of the workplace. From management-labor conflicts to work nightmares to stream-of-consciousness raptures while daydreaming on the job, the poem tracks the woman's thoughts while performing repetitive tasks. Her observations are witty, a testament to individual involvement.

*we are their allergy, their bad dream.
they need us too much, with their talk
of
"carrying us" on the payroll.
we carry them, loads of heavy, dull
metal,
outmoded and dusty.
they try to control us, building
partitions,
and taking the faces off the phones.
they talk to us slow and loud,
HOW ARE YOU TODAY? HERE'S
A CHECK FOR YOU.
As if it were a gift.*

*we say even if they stretched tape
across our mouths
we could still speak to one another
with our eyebrows.*

She protests against a system that allows workers to be treated as commod-



Karen Brodine

ities, where it is somehow considered normal to "toss the body out on the sidewalk at noon and at five, then they spit the body out the door at sixty-five." Through her protests and rants, she sees some hope for a better way of living: "remember that fish/that lives so deep/it has grown its own light/energy glaring out of the bulbs of its eyes."

The second and third sections, "Fireweed" and "Here, Take My Words," are snapshots and reflections of her childhood, with eulogies dedicated to her musician mother and activist grandmother, who was confined to a convalescent home during the latter part of her life. These sections illustrate the principles Karen dedicated her life work to.

The final section, "Left Feather," deals with censorship on various levels: the silencing of her grandmother through a series of job discharges during the McCarthy years, the censoring of sexuality, or the struggle to allow herself expression and acceptance of a life with cancer. These poems demonstrate her lyrical abilities more so than in any other place in the book. At times, they dive into the images of surrealism, yet always stay in the language of the everyday.

The primary strength in these poems is the content. They are aggressive, but often fall flat on the page. At their best, they are political manifestos calling for an interaction between bodies and minds. "All my life," she writes, "the urgency to speak, the pull towards silence."

—Marina Lazzara

REPRODUCTIVE RIGHTS RANT

I tried to stop what happened that day, but it wasn't going to be stopped. A woman died. It was reported as a car accident, a not terribly unusual event. But it didn't have to happen. On some level, the clinic escort team failed miserably. I was co-coordinating our efforts with a woman considered a warm, nurturing escort, a self-avowed Christian-for-choice. I didn't trust her as far as I could throw her (which in retrospect is what I should've done).

In most respects the morning had seemed successful. We'd deployed enough people around the clinic that the Operation Rescue (OR) scouts, checking all the clinics open that morning, wouldn't be likely to advise a hit against ours. We'd avoided the ORs' attempts to bump or trip us so they could tell the police we were assaulting them. We'd brought women smoothly through a particularly skilled cohort of OR "sidewalk counselors," a quartet of young women in their late teens and early twenties.

These "counselors" looked... meek; they stood apart from the contingent of fetus-porn sign carriers yelling about babykilling, and from the vicious old men fondling their beards (tough old coots with military backgrounds written all over them). The "counselors" pounced like piranhas on any woman from fourteen to sixty that passed near the clinic. One of them, during a previous action, had looked me straight in the eye as I escorted a client into a clinic and, hearing people use the familiar chant "Pro-life, that's a lie, you don't care if women die," responded in an emphatic whisper, "That's right!"

By the second time they messed with a client we were ready. We blocked their sign-carriers before they blocked us, and formed corridors to give the client and the escort smooth passage. We even dampened the "sidewalk counselors'" piercing cries of "Don't go in there! They'll hurt you and kill your baby!" by holding up our placards ("This Clinic Is Open" and "Defend Our Abortion Rights") and singing "Row, Row, Row Your Boat."

But what happened to a woman I'll call "Ana" occurred after she got into the clinic. Someone got to her boyfriend, perhaps between the clinic and his car after he dropped her off. He decided she didn't have any right to get the abortion.

***Either these old guys
HAVE the right to tell
me what I'm gonna do
with my uterus, with the
next one to twenty years
of my LIFE, or else their
campaign has as much
moral legitimacy as a
fucking Marlboro ad!***

First he got loaded. Then he came into the clinic. He started yelling in the waiting room about how she couldn't kill his baby. The clinic staff ejected him, warning the escorts not to let him back in. But meanwhile he'd gotten her purse. He demanded to see Ana after she was already being prepared for surgery. If only we had been strong; if only I had gotten some of the women together and just taken back the purse (the men on the escort team that morning were all very uncomfortable with this idea!).

My Christian co-coordinator instead chose to call in the police. It seemed opposed to what we stood for, but she insisted. Something was already terribly wrong, and it got worse when the cop hung out with the kid, just talking like brothers. I still thought I could save the

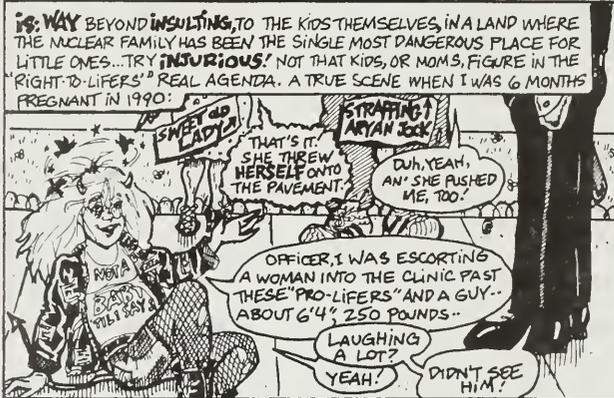
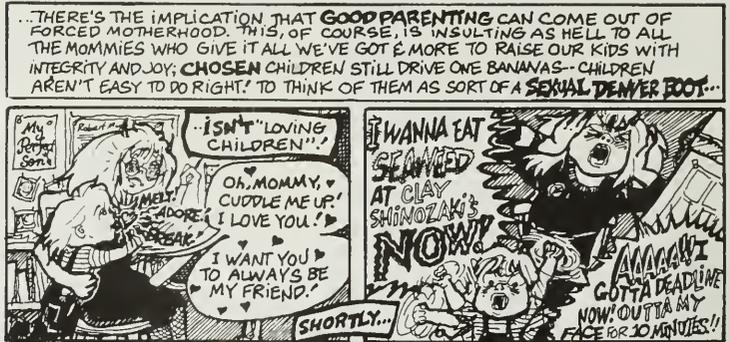
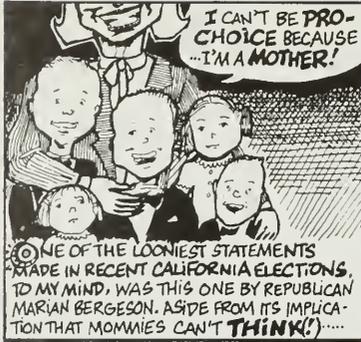
situation. I'd get him to leave, then we could handle it. The cops always claimed they didn't want to be there anyway, that they had more important things to do.

I told the cop that things were pretty much over for the morning, that we had everything under control — gave the whole rap, none of it false. But now that this cop had been invited in, like a vampire, he wasn't about to let go. He threatened and lez-baited me, obsessed with getting to talk to Ana. He pled the kid's case. He lied to me and to the clinic director in his efforts to get her to bring Ana out of recovery to him.

Ana had said to me that she was never going to see her "boyfriend" again, and that she didn't even know if he was the sperm donor for today's problem. She thought he was pretty crazy. But if he had her purse, how was she going to call her brother-in-law (who, like most of her family, lived over an hour from San Francisco in a lower-income commuter town) to come and get her? While she was trying to work out getting home without her purse *and* without this creep, the policeman was working to undermine her decision, put her back into the intoxicated young man's custody. Finally, he simply ordered the clinic to surrender the patient to him, and then proceeded to badger her until she agreed to go home with the drugged-out anti-abortion ex-boyfriend who'd seized her purse. The cop, with the tacit support of the Christian escort coordinator, pulled out all the emotional stops—*He just wants another chance, he just wants you to know how much he loves you.* (Subtext: he's got a right to you.) How much did he love her? I guess she found out. I hopelessly watched as she got into his flashy car and drove away.

I let a woman be murdered; I watched her get sucked down the drain by a desperately sweaty blond cop who had entirely too much emotional investment in getting her to ride with the purse-thief. I learned once again what a crock

(NICE GIRLS DON'T TALK ABOUT...)
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 "MAMA DRAMA"
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Anti-choice? Wanna put it on the line? GIVE BAY AREA CAUTION FOR OUR REPRODUCTIVE RIGHTS a call at 626-5510.11

graphic: Angela Boccage

of shit being nice is, and Ana learned how much love and protection there was for her in this world. Later we read about a freak crash on the freeway heading to her small town, involving a rare and flashy vehicle and two Hispanic teenagers.

All in One Day: Mainstreaming the End of Choice

Shortly after columnist George Will suggested that rather than focus the anti-abortion battle on electoral races (where it tends to be lost), enemies of abortion rights re-animate the doctrine of abortion-as-sin by "stigmatizing" the woman involved, examples of his strategy began popping up everywhere. Women, already urged to be anxious about everything from exercise to eyebags, were now invited to forget 20-plus years of the tenuous right to make choices about the uses of our uteri, and instead wring our hands over the "moral crisis" (whose?) of abortion.

It may have started with Will and his ilk, but our own willingness to be such self-doubting wimps doesn't help. I remember a sensitive, oh-so-ethically-tortured cover piece in the *Village Voice*

by a woman who had apparently had a few bad experiences with feminists (hey, who hasn't?), decrying the frequency of abortions. Instead of reaching the obvious conclusion—that current contraceptive technologies just aren't good enough—she joins the Will chorus and blames the women. Her delicate soul was tormented by wondering if women were seeking abortions as rites of passage? New Age Crap like this implies that we should instead be crowning our pubescent lasses with spring blossoms on windblown beaches while singing menstrual chants. It's also callous stupidity, losing sight of the fact that when women come of age, we can get pregnant, with or without chants, garlands, and beach (which, come to think of it, would be a lot nicer than looking at the sappy posters in a clinic recovery room). So we need the option to end unwanted pregnancies, just as we need affordable effective prenatal care.

If we want to do anything other than begin the mom life at fourteen or fifteen, the sane, smart, even courageous choice for a young woman as well as for the children she may one day raise, is abortion. The *Voice* writer aside, very few women that I know experience any

physical or emotional malaise post-op. It's just like having a period, or should be. The influence of "stigmatization" erodes the self-esteem which promotes physical resilience: some clinic workers have told me they see more depression, discomfort, anxiety, and over-justification among women who were got at by anti-choice family members or acquaintances. Who knows? With the proliferation of New Age Crap riding on the coattails of feminism and hippie-nostalgia, we'll probably soon be prodded to agonize over fetuses' past lives.

My best friend, the Red Diaper Baby, has noted that in olden times good commies simply said, "Beware the mass media, they're a bunch of pigs," while today scads of would-be dissenting voices buttress their yen for a Front Page career by producing reams of analysis of the beast. One day of *S.F. Examiner* reading and I'm wondering how much my buddy's kidding when he sighs for the straightforward caveat of the good old days. First, the liberal Christopher Matthews column suggests without irony that the \$5+ million war chest the Conference of Catholic Bishops is preparing for a sin-based anti-choice multimedia ad campaign is modest, even frugal,

and perhaps *does a service to "us all."* You see, it brings "the debate" out of "the cold, clinical, medical realm" where findings on brain function and viability just happen to consistently support calling a fetus a fetus and a baby a baby. *Chris, Chris, I wanna cry from the heart, there's no "debate" here!* Either these old guys *have* the right to tell me what I'm gonna do with my uterus, with the next one to twenty years of my *life*, or else *their campaign has as much moral legitimacy as a fucking Marlboro ad!* However ascetic you may find a \$5 million P.R. budget.

In my experience, tolerance of apologetic, morally sensitive attitudes about abortion plays into the same hands which the women and men who want to censor pornography are tickling: the Religious Right.

Former car salesman Randall Terry, the troubled son of a violent father and a mother whose family has a tradition of feminist activism, including reproductive rights work, founded Operation Rescue in the mid-80s after an intense on-the-road conversion experience whose details change depending on whose version you hear. OR has a slick magazine, state-of-the-art computerized fundraising, savvy body-mobilizing campaigns through sympathetic Catholic and fundamentalist churches, and tenacity. Its assets have been seized, its activities enjoined, but at this writing, it seems to have returned from the brink once again.

Its Wichita extravaganza has given George Bush a chance to look moderate as the Justice Department abets OR's new strategy—taking the fight to women's clinics in the Bible belt to avoid the more aware urban areas where there has been quick response from civil liberties, women's, and gay organizations (as well as the new network of militant pro-choice groups which has arisen all over the country, but mostly in metropolitan areas, in response to OR itself).

Operation Rescue unites groups of people who sincerely believe all the other groups are going to burn in hell, devout Roman Catholics, Bible-believing Baptists and Spirit-filled Pentecostals, in rather authoritarian public displays of passive aggression: mass sing-, lie-, and kneel-ins to shut down medical facilities where abortion is offered. With less media presence OR members mount more violent attacks against clinics, their clients and escorts (calling the latter

"death squads" is one of their more absurd attempts to ape activist-speak). The clinic attackers I've spoken with are quick to point out that there has never been an OR member convicted of actual clinic arson or bombing, but membership is fluid, and their training literature advises outright deception (key OR leaders in the Bay Area disavow all knowledge of the organization!) as well as vagueness about OR activities beyond the orchestrated media events.

A trendy piece on contemporary Civil Disobedience activism, also in the *Examiner*, centers on one Colonel Ron Maxson, painting the Nam vet in rose-soft hues. This, we're told, is a gentle, simple man, a man of conviction, fighting for what he believes despite police brutality and a world that won't understand. What Colonel Ron does to express his great soul is physically block women from entering medical facilities; this "activist in the tradition of Gandhi and King" is a member of OR.

A fifteen-year-old girl-child is left standing in the street waiting for police to remove Maxson and crew. (*If they do; without strong pressure from pro-choice groups, police response is typically to order the clinic closed. At one OR action, I even saw the officer in charge ask the OR in charge if there were any pro-choicers he wanted arrested, and proceeded to arrest them.*) The Holy Spirit might speak in her heart, Maxson reasons, telling her not to go through with her abortion. That these hours might also mean hemorrhaging from laminaria insertion, shock, needless pain, infection, perhaps even returning home for a desperate and ignorant attempt to self-induce and possible death, doesn't bother a man with the guts to stand by his convictions.

After all, OR mentor Joe Scheidler, author of *Closed: 99 Ways to Stop Abortion*, Chicago Pro-Life Action League founder, and suspected clinic bombing participant, declared "a war of fear and pain" on women seeking abortions. I've seen ORs gleefully cite the (fabricated) *Closed* passage claiming that infections, perforated uteri, shock, hemorrhage and death rates rise by 5-12 percent at a clinic that was targeted by OR. To Maxson, confrontations with "death squads," which have resulted in concussions, internal injuries, cuts, sprains, bruises, and at least one miscarriage for clinic escorts to date, represent "a spiritual confrontation between good



This is a pro-choice poem

"Are you sure you want to do this?" she said doubled over crying silk flower pants drop to the floor twenty milligrams of valium I am down but not out I reach for your hand it is doughy, wet where are the big-strong-mans-hands when I need them WHERE ARE YOU? I DON'T EVEN SEE YOU HERE!

Screaming white all around me I am black I am blind I can't stand this three page list of details to sign complications possibilities legal implications I don't want to know I can't read English anymore I've lost the power of language LANGUAGE IS FOR PEOPLE WHO HAVE CHOICES!

Your spectacles are suddenly madman's spectacles don't tell me this will hurt when you can't know how much knives in my belly knives I say are you almost through black nurse looks at me she thinks I am weak her hair is braided it is beautiful I think IT IS OVER.

Heating pad on my belly oatmeal cookies chamomile tea sunshine outside your car cutting through the streets like a silent brown jaguar NOTHING TO SAY.

—Paula Orlando

and evil." It's hard for me not to agree.

Raw Good and Evil, or, Background on Us and Them

It's not fashionable, probably not PC, and worlds away from New Ageism, but I do see Operation Rescue and its fellow travellers as my enemies, as "Them."

It's my experience as an escort coordinator that has inspired this rant. There's a clinic in an old building, on an incredibly chilly corner of San Francisco, redolent of eucalyptus, where voodoo Priestess, underground railroad station-mistress, Madam, and probably herb-wise woman abortionist Mammy Pleasant had her establishment. Here she planted the fragrant messy trees with her own hands. Today it's the site of a low-cost clinic. This privately-owned facility is OR's most-targeted site in San Francisco, possibly because of proximity

to OR-sympathetic churches like St. Dominic's and St. Mary's (aka St. Domino's and St. Maytag's), serving a cross-section of Bay Area women, the majority being younger women of color.

Somehow my partner and I managed to get up early enough every Saturday morning for almost a year — until our own demanding daughter arrived one November dawn — to work with the Bay Area's direct action, pro-choice coalition defending the clinic. We escorted clients past "pro-lifers" who shoved, shouted, and waved huge color blow-ups of dead newborns purported to be aborted fetuses in the clients' faces. They tried to photograph clients' license plates and faces. They used the heavy plywood backing their fetal porn to bash pro-choicers, and the substantial size and weight of their bodies to threaten. They cunningly used the police to present their actions as simple, First-Amend-

ment rights-like picketing. The surreality was perhaps enhanced by the colors and shadows of pre-sunrise, but it was confirmed by the fact that all this went on with almost no mention in the news. The biggest attacks would get at best a fact-garbled paragraph or two buried deep in one of the papers.

It never ceased feeling strange to go about my weekend after clinic mornings. In the normal world, traffic whooshed by the corner, at most honking an encouraging honk at the sight of the pro-choice placards, and most men weren't poised to hit or trip me; most cops and old ladies weren't threatening me, and most people either didn't know or didn't care that women's basic privacy, basic dignity, basic rights to choose and receive medical care, were being routinely shit on.

—Angela Bocage

graphic: Angela Bocage



TEMPORARY CODING

I always worked as a temp, usually doing light industrial work, but it wasn't until I moved to San Francisco that I got a job in a law firm. I had no relevant experience or interest in law; my last job before moving here was cleaning up rat feces in a Lipton warehouse. I got my first job interview through a "clerical" help wanted ad. When I showed up for my interview, I was an hour late, I had holes in my shoes, and I flunked the office competency test. Much to my surprise, I was working right away at one of the biggest law firms in California. Later I realized that the only worthwhile advice I'd been given about job interviews—lie through your teeth—had paid off: I told them I was "thinking about" law school. Truth was, I was thinking about the least painful way to make a buck, and working in a posh office seemed better than crawling around with a Dust Buster in a damp gloomy warehouse looking for piles of rat shit.

Having stood for hours at photocopiers, my eyes nuked by the rolling strobe light, I've had plenty of time to contemplate my naivete. I always get stuck where no one else will work, so I either fry in direct sunlight behind a plate glass window or freeze in a room with out-of-control air-conditioning. I once worked in an office that every day at 11:30 filled with a mysterious noxious-smelling gas from a vent; despite my numerous complaints, nobody ever responded.

So instead of screwing caps on deodorant cans one after another, I'm turning pages of paper. At least I have some energy left at the end of the day to pursue other things. A short stint as a furniture mover cured me of any fond illusions about manual labor (something I often hear among male office workers). As a temp, there's always the hope that you might land an easy job where you can get away with a lot of fucking off; I've had a few.

For the last four years, off and on, I've temped in about twenty big law firms in the San Francisco financial district. Assignments have varied in length of time from nine months to nine minutes, but the introduction is always the same: you are under suspicion, a likely pick-pocket or information thief.

You forfeit your rights when you start

work as a temp in a law firm. You're asked to sign a statement that looks like a confession, swearing you will divulge absolutely nothing about the case you're working on to any person for any reason. According to the warning, if you



At my last job, I was getting paid \$10 an hour. The temp agency was billing the law firm \$20 an hour. The law firm, in turn, was billing their client \$40 an hour. Other than what I earned hourly, I got zilch.



so much as mention the case to anybody, the full weight of the law will descend upon you. "You might be able to plead spousal immunity," flected one supervisor after threatening us with merciless fines and jail time.

Law firms "hire" temps, when need arises, to do what they haven't got machines to do yet, or what they can't

get their other employees to do: the most monotonous, labor-intensive tasks involved in labeling, indexing, storing and retrieving vast quantities of documents.

Whole weeks of my life have been consumed by "bates stamping," a task in which a small numbered sticker is transferred by hand from a computer-generated sheet onto another piece of paper, thus making it a "document." Repeated thousands of times eight hours a day, five days a week, this would give anybody repetitive stress injury as well as brain damage. I recently did this seven days a week, twelve hours a day, while a berserk legal assistant badgered me to "Go faster! Go faster!" so that I wouldn't "cost the client (Cetus Corporation, a biotech giant) so much money."

A common task I perform is called "coding." That means reading each document (usually something like an invoice) for information (date, names, subject) and entering it onto a form. It's then sent to a word processor, who puts it into a tidy data base which the lawyers can access with the stroke of a finger.

The emphasis on secrecy is absurd. I'm kept in the dark beyond what's necessary for the job; I have no idea to what ultimate purpose my labor contributes except the meaningless perpetuation of bureaucracy.

Occasionally while coding I'll see an internal memo which reveals the prepubescent character of your typical lawyer or executive, giving me a bitter laugh. I remember one top honcho drawing analogies between the services his company provides and the superhuman qualities of his favorite toy, Action Man, which he proceeded to describe in admiring detail, as advertised on one of his favorite Saturday morning cartoons.

My experience at one law firm (appropriately named "Cooley"), coding on a Genentech case, was not an easy job. We were segregated from the main office in a gloomy warehouse down the block, over a hundred of us, working at crowded tables in two six-hour shifts, six days a week. It was explained to us that six

game, my fictitious labor time contributes to enriching the parasites who suck me dry day after day. What would

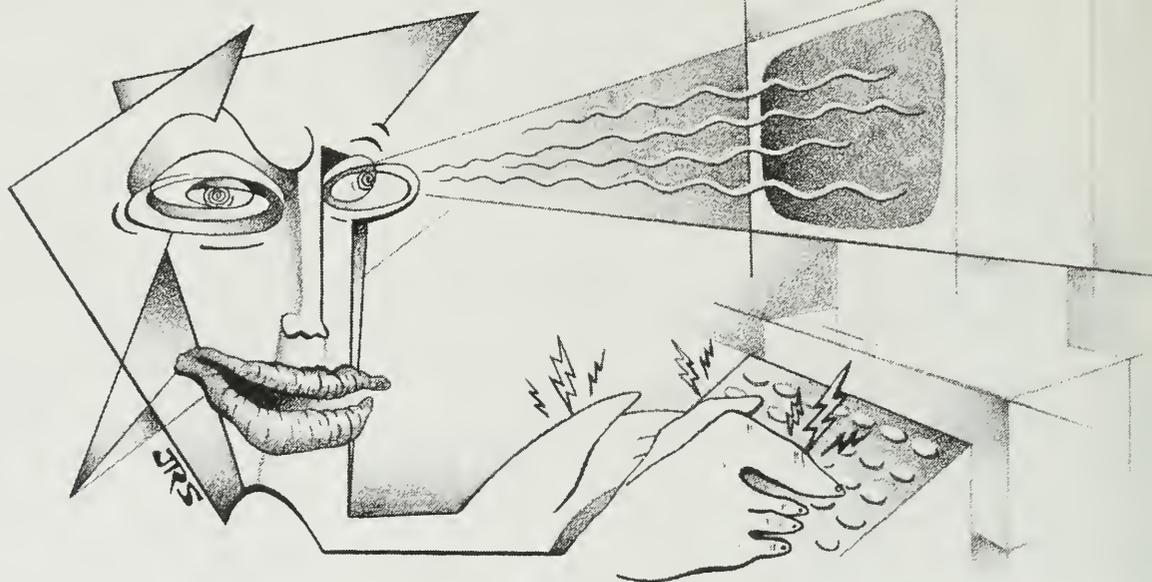
bother them is that I found the loopholes in the rules governing their office. Drinking a beer in the park, I toasted the

loopholes.

—Mickey D.

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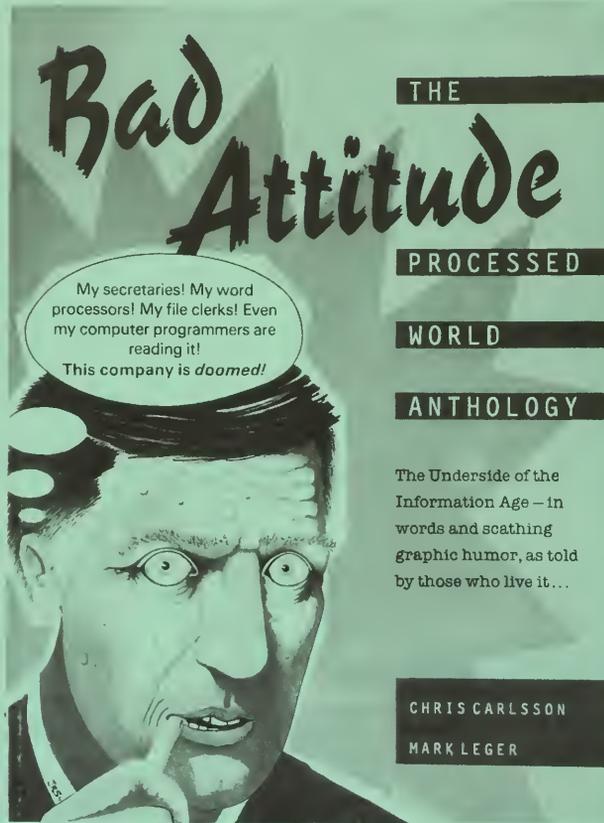
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