1-1-1998

Toward effective and ethical drug abuse prevention policies: The case against indiscriminate drug testing

Robert Eugene Gladd
University of Nevada, Las Vegas

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TOWARD EFFECTIVE AND ETHICAL DRUG ABUSE PREVENTION POLICIES:

THE CASE AGAINST INDISCRIMINATE DRUG TESTING

by

Robert E. Gladd

Bachelor of Arts
University of Tennessee
1985

Master of Arts
University of Nevada, Las Vegas
1998

A thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Arts

in

Ethics & Policy Studies

Institute for Ethics & Policy Studies
Department of Political Science
University of Nevada, Las Vegas
May 1998

UNLV

Thesis Approval
The Graduate College
University of Nevada, Las Vegas

April 22, 19 98

The Thesis prepared by

Robert E. Gladd

Entitled

Toward Effective and Ethical Drug Abuse Prevention Policies:

The Case Against Indiscriminate Drug Testing

is approved in partial fulfillment of the requirements for the degree of

Master of Arts in Ethics & Policy Studies

Examination Committee Chair

Dean of the Graduate College

Examination Committee Member

Examination Committee Member

Graduate College Faculty Representative

ABSTRACT

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by

Robert E. Gladd

Dr. Jerry L. Simich, Examination Committee Chair
Professor of Political Science
University of Nevada, Las Vegas

For an increasing breadth of organizational domains, a negative illicit drug screen result has become the final and paramount criterion for admission and/or continuing participation. Such a policy is vigorously promoted to the private sector by government and vendors of testing services as an inexpensive and vital tool for suppressing drug abuse. This policy, however, can been shown to be at once empirically unwarranted, methodologically dubious, constitutionally impermissible, and ethically unsustainable. Reducing the harm attributable to illicit intoxication is a legitimate and worthy social goal. The ends, however, cannot justify such means of indiscriminate and intrusive surveillance.

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CHAPTER ONE

One hopes not only for the courage of one's convictions,
but also for the courage of one's doubts in a world of dangerously passionate certainties.

– Eric Sevareid, Not So Wild A Dream

Argument overview

Drug testing is conventionally viewed as an effective and necessary means of both deterring illicit drug use and identifying those in need of "treatment" for their "addictions." Widely employed in competitive amateur and professional sports, mandatory drug testing programs are now policy in 80% of major U.S. corporations according to an American Management Association report published in mid 1996. Recent federal legislative proposals have sought to extend mandatory testing to all branches of the federal government and to all direct or indirect recipients of federal funds (e.g., welfare and public housing clients, students receiving government backed school loans, businesses with federal contracts, etc.). President Clinton last year proposed testing for all probationers, parolees, and teen drivers' license applicants.

The U.S. Supreme Court, after handing down three rulings declaring suspicionless drug testing constitutional under a variety of arguably dubious circumstances, recently struck down a Georgia law requiring drug tests of state and

local political candidates. See *Chandler et al. v. Miller, Governor of Georgia et al.* Docket 96-126. This 8-1 decision (Chief Justice Rehnquist dissenting) held that "symbolic" government-administered testing programs such as Georgia's are unconstitutional. The Court rejected, among other assertions, the Marion-Barry-Made-Us-Do-It rationale cited by the Georgia counsel at Orals. (Note: Additional information on this latest case is available in the antecedent *Chandler v. Miller, Fed. 11th Circuit, No. 95-8230,*[1] 1996 appellate ruling, the ACLU *Chandler v. Miller* Supreme Court Amicus Brief,[2] and a personal statement by Walker Chandler himself, as appended to an ACLU press release.[3]) Unhappily for those objecting to indiscriminate private sector drug screening, however, majority opinion author Justice Ginsberg also reiterated the Court's position that private sector drug testing

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[1] *Chandler v. Miller, Federal Appellate Court, 11th Circuit, No. 95-8230,* [http://www.law.emory.edu/11circuit/jan96/95-8230.man.html], March, 1998.

[2] ACLU *Chandler et al. v. Miller, Governor of Georgia et al.* Amicus Curiae Brief, [http://www.aclu.org/court/chandler.html], March, 1998.

[3] In Mr. Chandler's own words: " . . . We may ask how such a law could be passed, one that makes a mockery of our country's credo of "innocent until proven guilty." A brief look at today's political climate is all we need to find the source of such a flawed statute. Considering the mounting pressure resulting from this nation's stagnating war on drugs, we should not be surprised how this faulty bill could be passed. Legislators have attempted to vent their frustrations by infringing upon the electoral arena through whimsical policy. This, perhaps, may be the most dangerous implication of all. Everyone who runs for office must agree with the majority-elect over certain policy issues.

"However great the problem of drugs may be in this country, this does not give policy-makers free license to pass such a constitutionally flawed law. Regardless of our personal opinion of the crusade against drugs, we should not, as a society, mandate symbolic allegiance to the drug war. Refusal to undergo a suspicion-free test must be upheld as a valuable civil liberty. The Supreme Court cannot allow the war on drugs to take our civil liberties hostage." (Walker Chandler, [http://www.aclu.org/news/n011497b.html], March, 1998.)

opponents have no constitutional standing—that, in her words, the private sector is "a domain unguarded by Fourth Amendment constraints."[4]

The putative efficacy and propriety of drug testing rest on four basic premises:

1. Prevalence and risk: The aggregate epidemiological and socioeconomic data estimating the nature, extent, and cost of drug abuse are sound, justifying concerted preventive measures:

2. Preventive utility: Commercial analytical technologies are sufficiently accurate and precise—even in the face of already huge and growing specimen workloads—to unfailingly reveal recent drug use while avoiding significant problems of "false positive" accusation:

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[4] Some legislators simply refuse to listen with respect to the *Chandler* limitation on *government*-initiated drug testing. Then-Republican House member Susan Molinari of New York (who recently resigned to become a CBS-TV news anchor), flanked by fellow GOP Representatives Tom DeLay and Newt Gingrich, appeared at a news conference less than two weeks after the April 15th *Chandler* decision to announce her introduction of a legislative proposal to require drug tests of all U.S. newborns (in excess of 4 million annually), with positive lab results forwarded to child abuse agencies. Such, coming from an otherwise get-government-off-our-backs "conservative," exemplifies the confused policy climate of our war on drugs and the proper role of the indiscriminate drug test. Critics might observe that, as a practical matter, opting to wait until the *in utero* "damage" is extant seems a bit odd: were Molinari truly serious she would be perhaps offering legislation mandating that all women be monitored via drug testing throughout their pregnancies. Secondly, it is beyond dispute that illicit drug use is not randomly dispersed throughout obstetrical strata (or any socioeconomic strata). In *Chandler*, the Supreme Court for once recognized an epidemiological commonplace; indiscriminate screening makes no scientific sense (for the host of reasons we will explore in these pages). In the wake of *Chandler*, Ms. Molinari's proposal would appear to be constitutionally, well—stillborn: one more episode of ill-considered, photo-op political "Jars Wars" grandstanding, going nowhere.

3. Legal theory and case law precedent: Jurisprudential foundation and practice validate the use of drug testing despite the Fourth Amendment requirement of "probable cause" connected with the search for contraband; and

4. Ethical justification: The contentious notion of "privacy," to the extent that it can be considered a constitutional "right" at all, is a relatively recent, derivative, and "weak" right, one that must defer to society's right to fair competition, safe and productive workplaces, and a healthy, sober citizenry.

My thesis is that such premises are by no means incontrovertible; that mass drug screening fails to meet basic empirical criteria of epidemiological validity, methodological sobriety, and economic utility, while doing violence to both Constitutional and ethical principles. As suspicionless drug testing programs are marketed to ever-lower prevalence strata, they become little more than 50 milliliter loyalty oaths. Equitable competition, safe and prosperous work environments, and a healthy citizenry are indeed noble ends—ends worthy of means more ethical and effective than those constituting little more than Potemkin science in service of political symbolism and private laboratory profits. Let us now briefly examine the foregoing list of premises, assertion by assertion.

Prevalence and risk:

First, we can *stipulate* that recreational intoxication is no trivial matter, yet ample evidence exists that illicit drug use, as serious as it is on its own terms, is a relatively minor epidemiological concern when viewed in the context of the major

categories of voluntary risk-taking behaviors we see fit to regulate through tort and criminal laws and commercial risk underwriting systems—despite equally "preventable" and far more costly contributions to health, safety, and economic losses by tobacco, alcohol, poor diet, lack of exercise, infections, toxic agents, firearms, unsafe sex, motor vehicles, and so forth.[5] Moreover, much of the undeniable damage attributable to illegal drugs (e.g., toxicity, enforcement costs, crime) is a function of their very illegality. Yet, a selective neo-puritan hostility endures, immune to both ratiocination and real numbers, so decriminalization proposals continue to be dismissed out of hand—primarily in *ad hominem* fashion

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[5] One internet edition reviewer vigorously assailed this thesis for characterizing illicit drug use as "a relatively minor epidemiological concern." This respondent chose to focus only on that clause in the sentence. Re-read the entire statement: there are ethically appropriate methods available to a society for dealing with risk and loss. It is the contention herein, however, that indiscriminate drug testing is not among them. Even under a standard and strictly utilitarian risk/cost-benefit analysis, mass drug testing fails to measure up, as I shall show as this work progresses. When you add in the legal and ethical considerations—in addition to the empirical context—you cannot but find a compelling case against such measures.

Ron Kotulak, in his recent book Inside the Brain, (Kansas City, Andrews & McMeel, 1996) makes the following observation: "Lifestyle risks account for half of the 2.2 million deaths that occur annually in the United States . . . [I]n an eye-opening 1993 article published in the Journal of the American Medical Association, the researchers described the deadly toll: tobacco, 400,000 annual deaths; bad diet and physical inactivity, 300,000 deaths; alcohol, 100,000; infections (mostly preventable) 90,000; toxic agents at home or in the workplace, 60,000; firearms, 35,000; unsafe sex, 30,000; motor vehicles, 25,000; and illicit use of drugs, 20,000." (pg. 188)

In other words, the last item on the list constituted less than 2% of the aggregate lifestyle-associated mortality experience. One can legitimately characterize that as "a relatively minor epidemiological concern," particularly in light of the massive resources devoted to the suppression and remediation of the "illicit drug problem." Drug War opponents insist that these resources are being significantly misapplied in Quixotic fashion, to the detriment of more rational preventive methods and more pressing social concerns.

coincident with alarmist slippery-slope "logic"—by those committed to the "War On Drugs." e.g., witness the recent rhetorical savaging of philanthropist George Soros subsequent to his backing of California's Proposition 215, the Medical Marijuana Initiative:

> Like many people, I was delighted this past November when voters in California and Arizona approved, by substantial margins, two ballot initiatives that represent a change in direction in our drug policies. The California initiative legalized the cultivation and use of marijuana for medicinal purposes. The Arizona initiative went further, allowing doctors to prescribe any drug for legitimate medical purposes and mandating treatment, not incarceration, for those arrested for illegal drug possession. It also stiffened penalties for violent crimes committed under the influence of drugs.
>
> These results are significant both in terms of their immediate impact and because they suggest that Americans are beginning to recognize both the futility of the drug war and the need to think realistically and openly about alternatives.
>
> Our drug warriors responded by pushing the panic button. The drug czar, Gen. Barry McCaffrey, claimed that "these propositions are not about compassion, they are about legalizing dangerous drugs." I was severely attacked for having supported the initiatives financially. Joseph Califano described me in The Post as the "Daddy Warbucks of drug legalization" and accused me of "bamboozling" the voters with misleading advertisements. I was denigrated in congressional hearings chaired by Sen. Orrin Hatch (R-Utah), and in the New York Times, A.M. Rosenthal went so far as to imply that I represent a new kind of "drug money."[6]

Do the "data" support a need for mass suspicionless drug testing? The "data" consist of long-term U.S. drug use history and more recent "medical" statistics. In Chapter Two we review the history of the American experience with currently illicit drugs and the evolution of anti-drug policy. In Chapter Three we examine the

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[6] George Soros, *The Drug War Debate . . . It's Time to Just Say No To Self-Destructive Prohibition*, The Washington Post, February 2, 1997, pg. C1.

sources and methods of obtaining and analyzing the epidemiological and "clinical" evidence proffered in justification of drug testing.

The preventive utility of mass drug screening:

Laboratory resources are finite: there are much more pressing uses for the equipment and skilled personnel required to perform high quality analytical chemistry. Furthermore, given the large disparity between official assertions of the prevalence of employee drug abusers and the percentage of confirmed positives reported in recent years, either the prevalence assertions are grossly exaggerated or the labs are testing at probable-cause concentration levels, thereby trading false negatives for false positives to avoid lawsuits from the falsely accused. If the latter is the case, we are egregiously wasting precious laboratory capacity in pursuit of drug war symbolism. Degraded quality of lab results may be a consequence for all others requiring reliable clinical tests. My own long and intense laboratory tenure indelibly persuaded me of what any honest lab manager will admit: analytical quality is a principal casualty of specimen overload. We examine in detail the relevant analytical methodology concerns in Chapter Four.

Legal theory and case law history:

With respect to the third assertion, the claim that the Fourth Amendment does not apply is specious on its face. We review the history and political conditions leading to the framing and exact lexical construction of the Fourth Amendment—every word of which emerged from the forge of Colonial disdain for the Crown policy

of forcibly deputizing merchants in the unrestricted pursuit of contraband. The claim that our government cannot enforce the right of privacy in civil commerce is an unpersuasive apology from an authority with the power to mandate the height of handrails in business facilities to the fraction of an inch, an authority that can prohibit the production of feedstock for private use on a family farm, an authority that otherwise dictates in numbing detail the parameters of fair employment practice. Indeed, on this last point, I argue that suspicionless employment drug testing violates Title VII of the Civil Rights Act of 1964 with respect to Fair Employment criteria: see *Griggs v. Duke Power*, 401 U.S. 424, 1971, which broadly addressed the issue of workplace justice. *Griggs* was not merely concerned with protection of "minorities" in the workplace: in validating Title VII the Court outlawed arbitrary, non job-skill related "tests" having controlling force in employment practice. And a mandatory drug screen has just that: controlling force, irrespective of its demonstrably feeble predictive utility (particularly with respect to negative test results: a coin toss may have a higher "NPV," or Negative Predictive Value). A person's perhaps otherwise extensive and stellar *curriculum vitae* counts for *nothing* should you refuse a required employment drug screen.

Worse, there is recent sentiment in Congress to make it effectively illegal to decline, by permitting the administrative branding of those refusing to be tested as "drug positive." Pay particular attention to sections 2704(a)[7] and 2707(b)[8] of *House*

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[7] SEC. 2704. STANDARDS FOR DRUG TESTING. (a) APPLICANTS- Nothing in this title shall be construed to prohibit an employer from requiring, as a condition of employment, that an applicant submit to and pass a drug test based on criteria established by the employer that is designed to achieve a drug-free

of Representatives 153 of the 104th Congress. This bill, ostensibly concerned with "quality assurance" in drug testing, has precious little to say regarding the specific technical elements of ensuring laboratory competence. It does, however, devote much language to the unrestricted expansion of coercive drug testing throughout sectors public and private.

The sponsor of this and related drug testing legislative proposals is Representative Gerald Solomon (R-NY), a senior member of the House and an aggressive proponent of escalating the War On Drugs. On the opening day of the 104th Congress, Mr. Solomon "went nuclear" with a battle cry for blitzkrieg in remarks entitled "Redeclare the Drug War', (Congressional Record, 1-4-95) in which his intent to subject all workers public and private to drug screening was utterly clear: "*The best method . . . involves testing in the workplace. By requiring the testing of all Government employees and officials we can set the standard for the private sector.*"

Consider a scenario: You apply for a job, and as you open the application form to begin filling it in, you encounter the following:

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workplace. Refusal by an applicant to submit to such a test may be treated in the same manner as a failure to pass a drug test.

[8] SEC. 2707. EMPLOYER PRACTICES . . . (b) DRUG-FREE WORKPLACE- Nothing in this title shall be construed to prohibit an employer from taking action necessary, up to and including termination, in the case of applicant or employee-- (1) whose drug test result is confirmed positive, (2) who refuses to take a drug test authorized under this title . . . *House Resolution 153*, Library of Congress: [ftp://ftp.loc.gov/pub/thomas/c104/h153.ih.txt], March, 1998.

1. *Have you ever committed a crime for which you were not apprehended?*
2. *Do you now engage in ongoing or periodic criminal conduct?*
3. *Do you support the war against drug abuse?*
4. *Are you willing to submit proof of the foregoing?*

Ask *any* human resources manager whether he or she would dare include such queries on a job application. A pre-employment drug screen, however, constitutes the exact bioassay equivalent of such patently illegal questions. Ferreting out criminal miscreants is properly the function of law enforcement, not the Human Resources Department. The political loyalty oath is a justly discredited relic of the McCarthy era. Having to "prove" one's innocence through suspicionless drug screening is the moral and methodological equivalent of witch dunking.

To sum up point three: Clearly, ours is a government that in fact *does* undertake to compel observation of fundamental civil rights by those whom it commercially charters and regulates; it can and should enforce the right to privacy in such domains rather than wasting time and tax dollars composing Constitutionally noxious legislation requiring asymptomatic citizens to demonstrate their drug abstinence to avoid summary labeling as "drug abusers."

Ethical justification:

Finally, on the necessity of "privacy": Whether one believes that the Fourth Amendment phrase " . . . *secure in their persons* . . . " is synonymous with a proscriptive legal right to bodily and psychological privacy, it can be shown that the

need for privacy is a fundamental aspect of personality, one seen and respected in one form or another throughout millennia and across cultures. The cardinal elements of virtuous moral character (e.g., courage, temperance, justness, industriousness, honesty) and the behaviors they guide are not mere functions of the prod of ongoing surveillance. Indeed, one can make the case that virtue is a matter of behaving morally even in the absence of observation or threat of apprehension. Those who framed our Bill of Rights were far more noble than a cynical conspiracy of tariff-averse fur traders and rum-runners motivated by nothing more than a desire to hog-tie authority. They knew that liberty—which we ostensibly revere as a founding principle—requires respect for individual moral agency: respect for the private absent probable cause justifying its breach.

It is ironic that the same 104th Congress that entertained a spate of harsh mandatory drug testing bills also expressed legislative concern with the protection of "privacy" via *House of Representatives 184*, the "Individual Privacy Protection Act of 1995." This bill asserted in Section 2(4) that "*the right to privacy is a personal and fundamental right protected by the Constitution of the United States.*" The detailed language of the proposal made clear the federal intent and authority to regulate private sector violations of "privacy." What the bill's authors and backers focused on, however, was the "confidentiality" of increasingly digitally stored and readily disseminated personal data collected in the course of commerce, not "privacy" of the Brandeis "right-to-be-left-alone" variety implicit—or as I shall contend, explicit—in the historical "strict construction" of the Fourth Amendment. On this latter, more fundamental issue—strengthening Constitutional proscriptions

against unwarranted snooping and data acquisition—the legislative proposal was utterly silent.

We feel compelled to draw a negative inference when someone voices opposition to indiscriminate drug testing on Constitutional and ethical principles. Such is an unfortunate reaction, one that I hope my thesis will show to be unwarranted and ultimately counterproductive with respect to legitimate social interests, one that I hope my effort will help serve to dispel.

Argument outline:

Chapter Two, drug policy history: A brief review of the pertinent particulars of the American Drug War and the evolution of drug testing policy. The history of currently outlawed intoxicants in America is one of waves of often religion-driven intolerance atop a racist undertow—a bible-thumping and xenophobic demonization of the indulgent. It has been a curious voyage from the *laissez faire* pharmacy to the sealed specimen vial.

A century ago, few could vote, but all could self-medicate as they saw fit. Today, anyone of majority age—irrespective of civic interest or acumen—can cast a ballot, but no one can self-medicate as he or she sees fit. Iconoclast libertarian and psychiatrist Dr. Thomas Szasz views this circumstance as one of our having traded a real right (personal autonomy) for a "fake" one (the right to select officeholders from cadres of candidates with only stylistically differing agendas for paternalism).

True? Or mere libertarian romanticism regarding a past that was far less pharmacologically and epidemiologically benign than alleged?

We will examine the history and spread of mass drug screening, which began in earnest as then-President Richard Nixon looked to his advisors for tactics with which to divert public attention from his controversial prosecution of the Vietnam war. Widespread, flagrant drug use was seen as emblematic of the anti-war/countercultural movement Nixon so despised. Moreover, military personnel in Vietnam had begun smoking marijuana and indulging in heroin use. A War on Drugs, complete with suspicionless drug testing, would be embraced with a fervor that has yet to abate in the face of substantial evidence of futility.

Chapter Three, epidemiology and risk assessment: Estimating the nature, extent, and cost of drug abuse. Upon close critical examination, serious questions emerge concerning the reliability of the data, most of which are gathered and disseminated by "War On Drugs" partisans intent on buttressing foregone conclusions. A small *hors d'eouvre* tray of some of the more outlandish "factoid" allegations:

- "Recent government statistics reveal that 1 out of 6 workers has a drug problem."
- "Estimates of on-the-job cocaine use (including crack) range from 10% to 50% of all employees."
- "Today, 1 out of every 10 babies born in the United States is addicted to drugs."
- "The nation's health care system is straining from the war on drugs with nearly 500,000 drug-related hospital emergencies a year."
- "Today's marijuana is 6 to 10 ten times more potent than that of 20 years ago."

- "Except for some advocates of drug legalization, no one seriously doubts that drug abuse kills and injures millions of Americans and their children each year."[9]

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[9] William J. Bennett, co-author of Body Count: Moral Poverty—and how to win America's war against crime and drugs, (New York, Simon & Schuster, 1996) page 19. Really? Are Ron Kotulak and JAMA off the mark by orders of magnitude? The authors insist in Body Count that "*[R]igorous and empirical data are the foundation for our analysis and the discussion that follows. As you will see, this book is chock-full of the latest and most reliable facts, figures, charts, and graphs about violent crime and drugs. To you the reader we say: bear with us. These numbers are crucial—crucial because we believe that any fruitful discussion about crime and punishment in America should proceed from a proper regard for facts.*"

No disagreement with respect to that last sentence. Body Count, however, offers up one correlation mistake after another. Bennett *et al* begin with a lengthy and lurid recounting of unspeakable, headline-grabbing recent violent crimes: from drive-by shootings to thrill-killings to horrific tales of child abuse. This is followed by a segment entitled *Liquor, Disorder, and Crime*, then a chapter on *Restraining and Punishing Street Criminals*. Only after 136 numbing pages of poignant crime victim vignettes and "hard" yet irrelevant data, do the authors get to their fundamental assertion (Chapter 4, *Drugs, Crime, and Character*): that illicit drug use is caused by and causes what they call "moral poverty," and by direct implication, that drug use causes the bulk of our crime problem: "*If one wants to know the immediate causes of much of America's moral poverty, the destruction of large parts of our inner cities, and its record-high crime rates, it is impossible to overlook drug use*. (pg. 137, emphasis mine).

For these authors, illicit drugs are more or less circularly *bad* because they are illicit, *illicit* because they are bad. More to the point, drugs are bad because they are "pleasurable" (pg. 141) and that "drug use fosters moral poverty and remorseless criminality; that drug use destroys character and brutalizes the lives of users and those around them" (pg. 139). Total abstinence is the only solution for Bennett, Dilulio, and Walters.

Never mind that the vast majority of illicit drug users commit no crimes other than their acquisition and use of drugs. Never mind that the National Academy of Sciences recently concluded (see Under the Influence? Drugs and the American Workforce) that "*[M]ost alcohol and other drug users do not develop patterns of clinically defined abuse or dependence.*"

This book is shot through with vague words and phrases such as "fosters," "associated with," "linked to," "correlated with," and so forth *ad nauseum*. The "hard data" come from the usual lineup of suspect partisan sources. The authors' conclusions? More enforcement; harsh punishment for even occasional recreational drug use; drug testing; zero tolerance; dismissal out-of-hand of all talk of "root

All of the foregoing "facts" came from ostensibly reputable sources. None of them can be substantiated.

Chapter Four, laboratory methodology: Supreme court Justice Antonin Scalia, in his majority opinion upholding random drug tests for student athletes in *Vernonia School District 47J v. Acton et ux* (Docket 94-590, 1995), writes that "*[T]he laboratory's procedures are 99.94% accurate.*" What can such a claim possibly mean?

- That a production specimen result of 100 ng/mL. is consistently confirmable within a range of ± 0.06 ng/mL. when divided into multiple aliquots for replicate analyses?[10]
- That the lab correctly identifies 9,994 out of 10,000 true positives? (The "alpha error" level, or "sensitivity" criterion.)
- That the lab correctly identifies 9,994 out of 10,000 true negatives? (The "beta error" level, or "specificity" criterion, analytically the inverse of "alpha.")
- That the ratio of true positives to false positives is 9,994 to 6?
- That the ratio of true negatives to false negatives is 9,994 to 6?[11]
- Any of the foregoing documentably stratifiable by analytical parameters? Across a range of concentration levels, all the way down to the cut-off limits? For every instrument and technician? Across time?
- Or, (from the SAMHSA/NIDA federal lab certification protocol) that the lab can correctly identify and quantify external PT ("performance test") specimens within ± 20% of the reference values at least 80% of the time, and within ± 50%

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causes" (other than their own take on the topic); more Loving-Two-Parent-Norman-Rockwell-Families teaching Just-Don't-Do-It; more God in our lives.

[10] The abbreviation "ng/mL." is short for "nanograms per milliliter." A nanogram is one-billionth of a gram; a milliliter is 1/1,000 of a liter. An "aliquot" is simply a portion of the original sample prepared for analysis.

[11] A "false positive" is one where the test indicates the presence of a drug when none is actually present. Conversely, a "false negative" means that the drug *was* indeed present but the analysis did not detect it.

in the aggregate without a false positive, given a 10% false negative allowance? What?

A lab reports, for example, "123 ng./mL." of benzoylecgonine (cocaine metabolite[12]) in a urine sample. For openers, this implies not "122" or "124" (scientists call this the "significant figures" precision level). Minimally, such a finding asserts a (production, mind you) replicability of less than ± 1 ng./mL. Any takers?

A detailed inquiry into the incredible complexity of analytical chemistry methodology compels the conclusion that, in the absence of precise operational definitions—independently verified by meticulous internal quality control data and truly blind and rigorous ongoing external proficiency evaluations—Justice Scalia's "99.94%" means nothing, beyond a naive and unsustainable faith in the exactitude of mass-production commercial science.

"*In God We Trust: all others bring data.*" – Brent James, M.D., M.Stat.

Chapter Five, Constitutional privacy issues: Why do we have a Fourth Amendment, and should it really apply in drug testing policy cases? In her impassioned dissent in *Vernonia v. Acton* Justice O'Connor cited William J. Cuddihy's 1990 Claremont Graduate University doctoral dissertation Origins and Original Meaning of the Fourth Amendment. Cuddihy's treatise is a seminal, 4-volume, 19 lb., nearly 1,700 page compendium of exhaustive detail recounting the

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[12] Drug tests detect "metabolites," or biochemical derivatives of the originally ingested compounds. The word "parameter" refers to the particular class of metabolites.

customs and codification of search and seizure procedure from ancient times through the period of raging pre-revolution colonial antipathy toward the aggressive and arbitrary Crown search and seizure tactics, practices the Framers specifically sought to prohibit via the Fourth Amendment. Cuddihy illuminates "Original Intent" with a vengeance. Dr. Bork, meet Dr. Cuddihy. Yes, the Fourth Amendment should apply to drug testing.

The still contentious question, however, revolves around the circumstances in which the Court finds justification for "administrative exceptions" departures from the "probable cause" and "warrants" clauses of the Fourth Amendment. In addition to Vernonia, the two principal suspicionless drug testing cases prior to *Chandler* illuminate the inner turmoil of the Court with respect to the drug testing issue: *Skinner v. Railway Labor Executives Assn.*, 489 U.S. 602 (1989) (warrantless post-accident drug testing of railroad employees: upheld), and *Treasury Employees v. Von Raab*, 489 U.S. 656 (1989) (mandatory pre-employment and promotion drug screening of Customs Dept. personnel: also upheld). Among the curiosities here is Justice Scalia's majority opinion in *Vernonia*, which cites the Court's majority conclusion in *Treasury* in support of his *Vernonia* rationale—somewhat disingenuously ignoring the fact that he wrote a lengthy and scathing dissent in Treasury characterizing the majority opinion thereof as "*a kind of immolation of privacy and human dignity in symbolic opposition to drug use.*"[13]

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[13] In *Chandler v. Miller* the Court finally found "symbolic" drug testing programs constitutionally impermissible. Inexplicably, however, the majority refused to validate a central *Chandler* claim; that such "symbolism" had a fatal 1st Amendment entanglement in addition to the 4th Amendment "privacy" problem.

Chapter Six, privacy as an ethical principle: "Privacy" is a term with multiple connotations. We mandate by law and social norms that certain activities be conducted "in private." The privacy synonyms "secluded" and "exclusive" are positive keywords in real estate advertising. A media microphone rudely thrust in the face of a grieving parent who has just lost a child to an accident is disdainfully viewed as an egregious "invasion of privacy." Similarly, celebrities bemoan (and frequently litigate against) their losses of privacy at the hands of their tabloid pursuers. In some major public policy contexts, however, privacy seems to be what

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Consider the dissent by Justice Barkett in the 11th Circuit appellate case that led directly to the *Chandler* Supreme Court case:

" . . . Not only is the privacy surrounding an individual's bodily functions at stake, but all of the rights associated with participating in a democracy—rights of association, freedom of speech, ballot access, and the right to cast an effective ballot. We are not dealing merely with the denial of a job opportunity, but with the denial of opportunity to participate in our democratic form of government. In light of the interference with these liberty interests, giving the governmental interests here the greater weight seems especially unreasonable.

"Finally, I am concerned about the majority's conclusion that the government's actions in this case do not violate the First Amendment. The majority maintains that the government's purpose is not suppression of free expression. Yet, it supports its holding by citing the importance of ensuring that elected officials are "persons appreciative of the perils of drug use" and "sympathetic to drug interdiction efforts." Establishing a certain ideology as a "qualification" for holding public office appears to be a content- based restriction on free expression. Drug policy is a politically charged issue confronting many government officials who have disparate points of view regarding the "Drug War" and the efficacy of the means employed in fighting it. It is the function of public office holders to write, enforce, and interpret the laws, including drug laws. By conditioning holding public office upon submission to drug screening, however, the Georgia legislature effectively bans from positions of political power not only those candidates who might disagree with the current policy criminalizing drug use, but also those who challenge the intrusive governmental means to detect such use among its citizenry. This statute is neither neutral nor procedural, but, in the majority's own characterization, attempts to ensure that only candidates with a certain point of view qualify for public office." (*Chandler v. Miller*, 11th Circuit, Docket 95-8230: [http://www.law.emory.edu/11circuit/jan96/95-8230.man.html], March, 1998.)

we value most for ourselves, and what we would most like to deny others by casting aspersions on their privacy claims.[14]

How does a drug-abstinent individual counter the implication of cover-up motive in the question "*If you've nothing to hide, how can you object to being tested?*"—beyond the problematic retort, "*It's none of your business.*" We will examine developments in U.S. legal privacy norms, including current concerns regarding confidentiality in a digital age. We will then survey ethological, anthropological, cultural, historical, psychological, and philosophical evidence supporting the role of privacy in the development and functioning of socially competent citizens. Bentham got it wrong. The conventional framing of the privacy issue—which posits an intractable antagonism between personal privacy rights and social imperatives—is inadequate. A deeper understanding is required. Paradoxical though it may seem on a surface view, it can be shown that privacy is at once a personal and civic ethical good. The Panopticon[15] is by wide margin a net loser: devoid of enduring moral force with respect to the dissolute; irrelevant at best with respect to the upright.

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[14] Two excellent recently published resources address the multifaceted nuances of "privacy." See The Right to Privacy by Ellen Alderman and Caroline Kennedy (New York, Alfred A. Knopf, Inc., 1995) and Private Matters: In Defense of the Personal Life by Janna Malamud Smith (Reading, MA, Addison-Wesley, Inc., 1997). While the Adlerman-Kennedy book is principally a compendium of examples of privacy transgressions in a variety of contexts, the latter work is a detailed and eloquent defense of privacy as a psychological necessity and net moral good.

[15] "Panopticon" refers to the views of 18th century British philosopher and penal reformer Jeremy Bentham, whose proposed model for the perfect correctional institution—for which he coined the term "panopticon"—was one in which inmates would be subjected to total, continual surveillance. He posited that such "panoptic" oversight would lead to the internalization of socially acceptable values and behaviors among offender populations.

Chapter Seven, addressing counter-arguments: Testing proponents insist that suspicionless screening is at once indispensable, reliable, and "fairer" than the alternatives. Their arguments, while vulnerable to methodical criticism, are not entirely baseless; we must and shall address them forthrightly. Some examples:

- All of this high-minded hand-wringing over drug screening *vis a vis* the Fourth Amendment is just so much hot air—the 4th is not germane here; no job applicant, employee, athlete, or student has ever had a positive test result forwarded to the authorities for prosecution—the only circumstance which would rightfully bring the Fourth Amendment into play. Administrative privacy violations are properly dealt with in tort venues.

- Managers have ongoing and pressing production work to tend to; they cannot be expected to also don the role of drug detectives endlessly ruminating over the legalistic nuances of "probable cause." Moreover, restricted to "cause" testing, managers might hesitate to ever invoke it for fear of being sued by those claiming harassment—however frivolously—in the wake of subsequent negative assays.

- The "democratic" nature of mandatory testing: Everyone (ideally) from the CEO to the janitor is treated equally.

- Employers and co-workers have a right to safe and productive enterprises. Moreover, employers that fund life and health insurance benefits have a justifiable imperative to minimize such expenses. If you apply for private life and/or health insurance, you will be tested for street drugs in the course of the physical exam. Invasion of your privacy? What about the rights and obligations of the underwriter?

- The irrelevance of prevalence: As Justice Kennedy observed by the way of analogy in *Treasury*, (subsequently echoed by Justice Ginsberg in *Vernonia*), the fact that airport passenger screening almost never turns up weapons in no way negates the utility of the policy. Deterrence is often necessary—critical, even,—and cannot be evaluated solely by post-hoc empirical measures. Drug abuse prevalence might very well be considerably higher absent mandatory testing.

- With respect to the private sector, your argument fails to take into account the utterly legal norm of "employment-at-will." Employers have the right to monitor you at will on the job, and terminate you for any reason, however arbitrary.

Such are indeed (in varying measure) substantive rejoinders worthy of considered and cogent responses. They will receive them.

Chapter Eight, conclusions and policy recommendations: What if random and/or blanket drug tests were outlawed? Would we be left defenseless or seriously hampered in the effort to attenuate the damage caused by overindulgence in recreational toxins? Emphatically, no! With respect to the employment context, such assumes the continuing inevitability and optimal efficacy of the large and/or and impersonal command-and-control organizational paradigm in which employees are regarded as mere production means, responsive only to coercion. We can, however (and we *should*), improve on that to enact and administer policies that are at once effective and ethical. Frederick Winslow Taylor's pessimistic and adversarial "Theory-X" labor-management model has been revealed as the ossified organizational cadaver it truly is, its epitaph writ large by a legion of progressive leadership practitioners.

We need not destroy the polis in order to "save" it.

A final thought: This work is *not* is an apology for drug legalization. The argument herein is addressed to those who are in fact drug-free. While I am quite familiar with the decriminalization/legalization literature and find much of it well-argued and thought-provoking (see, for example, the excellent and extensive work compiled online at New York's Lindesmith Center[16]), I, like many, continue to have

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[16] Lindesmith Center for Drug Policy Research, [http://www.lindesmith.org/], March, 1998.

serious reservations, and if society insists on retaining draconian remedies for drug transgressions, so be it. Foolish, perhaps; counterproductive, perhaps; unjust, perhaps—but such is the subject of another thesis, and is mostly irrelevant to my policy argument. Some assume that if they are drug-abstinent (" . . . *nothing to hide* . . . "), they have no real stake in drug testing policy.

They are wrong.

CHAPTER TWO

Introduction to drug testing policy environment and history

What of the "data" supplying the foundation for anti-drug policy? Close scrutiny reveals much foggery and contradiction that can hardly be said to provide solid evidence for rational policy and lawmaking. In this chapter we briefly survey the history of the American experience with currently proscribed intoxicants. In Chapter 2 we investigate contemporary methods of drug abuse assessment.

We begin with an excerpt of a recent Harper's essay by Michael Pollan.

> The war on drugs is in truth a war on some drugs, their enemy status the result of historical accident, cultural prejudice, and institutional imperative. The taxonomy on behalf of which this war is being fought would be difficult to explain to an extraterrestrial . . . Is it the quality of addictiveness that renders a substance illicit? Not in the case of tobacco, which I am free to grow in this garden. Curiously, the current campaign against tobacco dwells less on cigarettes' addictiveness than on their threat to our health. So is it toxicity that renders a substance a public menace? Well, my garden is full of plants—datura and euphorbia, castor beans, and even the stems of my rhubarb—that would sicken and possibly kill me if I ingested them, but the government trusts me to be careful. Is it then the prospect of pleasure—of "recreational use"—that puts a substance beyond the pale? Not in the case of alcohol: I can legally produce wine or hard cider or beer from my garden for my personal use (though there are regulations governing its distribution to others). So could it be a drug's "mind-altering" properties that make it evil? Certainly not in the case of Prozac, a drug that, much like opium, mimics the chemical compounds manufactured in the brain . . .

> Someday we may marvel at the power we've invested in these categories, which seems out of all proportion to their artifice. Perhaps one day the government won't care if I want to make a cup of poppy tea for a migraine, no more than it presently cares if I make a cup of valerian tea (a tranquilizer made from the roots of *Valeriana officinalis*) to help me sleep, or even if I want to make a quart of hard apple cider for the express purpose of getting drunk. After all, it wasn't such a long time ago that the fortunes of the apple and the poppy in this country were reversed.[17]

While Mr. Pollan's opening sentence is beyond dispute (as we shall confirm below), I will not be holding my breath with respect to his speculative musing in the latter paragraph above.

For, our government "finds," on the basis of myriad reports—derived principally from news stories and social science investigative methods of wildly variant quality—that the use of illicit drugs, particularly in the workplace, is a sufficiently adverse social and economic phenomenon to justify the coerced participation of millions of asymptomatic citizens as "donors" of bioassay specimens for chemical metabolite analysis to uncover the presence of forbidden psychoactive recreational toxins. Willing, even eager submission to non-cause drug testing is coming to be seen as the latest variant of the Loyalty Oath, with aspersions cast upon the motives and character of dissenters. Legions of survey researchers provide an endless outpouring of statistics purporting to demonstrate the alarming prevalence and horrific economic and epidemiological costs of drug abuse. Vendors of laboratory

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[17] Michael Pollan, *Opium, Made Easy: One gardener's encounter with the war on drugs*, Harper's Magazine, March, 1997.

services assure us that their technologies are utterly reliable, that only the "guilty" need be concerned. It's "For Our Own Good," we are soothingly told.

Is any of this so? Are the enabling laws and policies ethical and wise, grounded in coherent history and viable scientific data? Are such measures critical to public health and safety? Are the analytical procedures and technologies truly effective, and fail-safe to the point of negating reasonable concerns over the possibility of false accusation? Can the nation's laboratory infrastructure deal competently with the already huge and rapidly increasing sample workload? Is such a forcible deterrence strategy the only feasible option available to us for promoting the health and welfare of both individuals and society as a whole?

These questions are timely ones. A spate of expansive and harsh new drug testing legislative proposals is under consideration by the 105th Congress and state legislatures around the nation, and commercial vendors of analytical technologies are rushing to market patented (and, as such, potentially enormously lucrative) alternatives to the conventional urine and blood tests traditionally used in drug bioassay. There now exist methods that use hair and saliva samples, as well as a recently introduced "patch" that, when worn on the skin, ostensibly reveals the presence of illicit compounds. Also recently in the news were reports on the commercial availability of a $20 drug testing "smear kit" called DrugAlert™ that parents are being encouraged to use on their children's clothing, furniture, and possessions if they suspect their kids of drug use. The kits are returned to the

vendor for analysis, after which a "confidential" report of findings is mailed back to the parents.

How did we arrive at such a state of alarm? The path leading to proposals for an ongoing metabolite surveillance state is a perplexing one.

A bit of historical perspective

While reflexive prohibitionists have waxed ascendant since the early 1980's to dominate the official U.S. drug policy agenda, much scholarly, even-handed, and nuanced historical research is available from the federal government itself. One example will suffice here to provide an overview of drug use history and policy evolution in the United States. A 1979 monograph entitled *Themes in Chemical Prohibition* by William L. White[18] summarizes the phenomenon clearly:

> The study of the historical themes in chemical prohibition movements can provide a helpful tool in understanding those institutionalized beliefs and myths which pose powerful barriers to any alteration in social policy on "drug abuse." This paper identifies the nature of those themes and presents the author's perceptions of how these inherited belief system have severely limited our options for more enlightened and effective strategies for the social control of chemical intoxication.
>
> Chemical intoxicants have been available to humans in almost all cultures since the beginning of time. Each culture through succeeding generations has assumed the task of defining and redefining which chemicals will be blessed, celebrated, or tolerated and which chemicals will be forbidden, legally prohibited, and condemned. In like manner each generation has confronted what the policy would be toward those persons who disobeyed the rules about the use of

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[18] William L. White, *Themes in Chemical Prohibition*, Drugs in Perspective, National Institute on Drug Abuse, 1979, [http://www.druglibrary.org/schaffer/History/ticp.html], March, 1998.

chemical intoxicants. The conversion of these policy definitions into law has often followed prohibitionist mass movements which sought through a variety of propaganda techniques to instill in the culture at large a certain set of beliefs and fears about the drugs in question. When these movements have been effective at generating statutory prohibition of specific drugs, this set of beliefs and feelings toward certain chemicals and persons who use them evolves over time to the point where they are seen as flowing from unchallengable sources. At this stage, alternatives to the policies that reflect these prohibitionist themes are viewed as unthinkable.

This paper is based on the following premises:

1. Current strategies toward the use and abuse of mood-altering drugs continue to be based on a set of beliefs generated from the prohibitionist movements of the late 19th and early 20th centuries.

2. The cementing of these prohibitionist beliefs into the very social fabric of American culture is one of the primary barriers to changing an outmoded and nonfunctional social policy. The integration of these beliefs into our culture has been so complete that to question them is immediately experienced by the culture at large as an attack on the institutions which have proliferated these beliefs, e.g., our national leaders, the law, our educational and religious institutions, and the family.

3. The development of national policies toward mood altering drugs has not and cannot be intelligently addressed until we expose and modify the irrational fears and beliefs upon which current policies are based.

White examines eight core themes that drive the prohibitionist agenda:

1. The drug is associated with a hated subgroup of the society or a foreign enemy.

2. The drug is identified as solely responsible for many problems in the culture, i.e., crime, violence, and insanity.

3. The survival of the culture is pictured as being dependent on the prohibition of the drug.

4. The concept of "controlled" usage is destroyed and replaced by a "domino theory" of chemical progression.

5. The drug is associated with the corruption of young children, particularly their sexual corruption.

6. Both the user and supplier of the drug are defined as fiends, always in search of new victims; usage of the drug is considered "contagious."

7. Policy options are presented as total prohibition or total access.

8. Anyone questioning any of the above assumptions is bitterly attacked and characterized as part of the problem. that needs to be eliminated.

One cannot but be struck by how little social and official attitudes have changed since 1979. Excerpts from each of the foregoing eight themes drive the point home:

> 1. The Drug is Associated With a Hated Subgroup of the Society or a Foreign Enemy
>
> The association of particular drugs with hated minority groups and foreign enemies has a long and colorful history in the United States. The association of opium with the Chinese, of cocaine with Blacks, of, alcohol with urban Catholic immigrants, of heroin with urban immigrants, of Latinos with marihuana, the claim that a myriad of foreign enemies were using these drugs against the U.S., and the image of drug crazed bohemians such as Ludlow, Baudelaire, and DeQuincy all were integral to the propaganda that generated the prohibitionist policies on each of these drugs . . .
>
> 2. The Drug is Identified as Solely Responsible for Many Problem in the Culture, i.e., Crime, Violence, Insanity.
>
> The attributing of crimes of violence, sexual assault, insanity, moral decay, etc. have been an integral part of efforts to prohibit the currently illicit drugs. A key element in this theme is the arbitrary designation of "good" and "evil" drugs with evil drugs possessing powers that can overwhelm all efforts at human control. "The Devil made him do it" is changed to "the drug made him do it." . . .
>
> 3. Survival of the Culture is Pictured as Dependent on Prohibition or Continued Prohibition of the Drug
>
> Implicit in the attribution of society's problems to the use of particular chemicals is the assumption and implication that these problems will disappear as prohibition becomes effective The

elimination of the drug and its use is thus characterized as crucial for the survival of the culture. Such claim have been characteristic of nearly all prohibitionist movements . . .

4. The Concept of "Controlled" Usage is Destroyed and Replaced by a "Domino Theory" of Chemical Progression

The history of prohibitionist pronouncements is replete with examples which propose a "domino theory" of chemical usage. Such a theory holds that the use of a particular drug (usually the one presently targeted for prohibition) inevitably and with rare exception leads-to the use of other drugs (usually drugs already prohibited or drugs already defined as evil). For example, the publication in 1798 of Essays, Literary, Moral and Philosophical by Benjamin Rush includes the following comments from an anti-tobacco essay: "*A desire of course is excited for strong drink, (by smoking tobacco) and these (cigarettes) when taken between meals soon lead to intemperance and drunkenness* . . . "

5. The Drug Is Associated with the Moral Corruption of the Young. Particularly Their Sexual Corruption

Chemicals have long beep inextricably linked in prohibitionist literature with the sexual corruption of young people. Joan Fran Rauch attacked chocolate in 1624 as a violent inflamer of passions. Tobacco was linked with sexual immorality in the 1850's, and the association between opium and the corruption of young women began in the 1880's with the publication in 1882 of H.H. Kane's Opium Smoking in America and China . . .

6. Both User and Supplier Are Defined as Fiends, Always in Search of New Victims; Usage of the Drug is Considered "Contagious"

The prohibition propaganda which has surrounded the presently illicit drugs represents a blatant manipulation of the symbols of evil that would do credit to Jonathan Edwards. Nothing can so excite an adult population as can anything which appears to threaten their own children. Since the Harrison Act of 1914, the user and the seller of illicit drugs have both been characterized as evil, criminal, insane, and always in search of new victims, the victims are characterized as young children. Drug usage is characterized as "contagious;" its increase (real or imagined) is characterized as an "epidemic." Efforts to reduce drug usage are referred to as the "war" on or "battle" against drug abuse. Persons who sell are called "pushers" in spite of increasing evidence that most persons get drugs, particularly their first drug, from friends and not some arch villain who seduced them on a street corner.

7. Policy Options are Presented as Total Prohibition or Total Access

> Prohibitionists have always characterized themselves as being in a moral/religious battle against evil. This quality of the prohibitionist movements eliminated the option of compromise. The choice as they saw and presented it was total prohibition or total access to the hated drugs. It was not that other methods of controlling use did not exist or would not work; it was the idea that all usage was sinful and must be stopped. Like an ongoing morality play, this same issue gets played out-repeatedly today with a new cast of characters. As bills are introduced to lower criminal penalties for various illicit drugs, one can anticipate any number of legislators standing to attack reduced penalties as an invitation for use and a first step toward legalization of drug X.

8. Anyone Questioning Any of the Above Assumptions is Bitterly Attacked and Characterized as Part of the Problem That Needs to be Eliminated

> A reading of any number of works which trace the development and evolution of our narcotics policy, all demonstrate the personal hazards in challenging those policies. To attack or challenge existing policies has opened one up for charges ranging from a lack of patriotism to charges that the critic is himself part of the international drug conspiracy. To most persons, confronting the issues surrounding the inadequacies of existing drug policy is simply not worth the challenges to their own personal integrity.

Anyone even mildly familiar with present-day War On Drugs rhetoric will readily note that "the more things change, the more they remain the same." The graphic below (figure 1) is emblematic of anti-drug attitudes during the 1930's and 1940's era of "reefer madness." While current anti-marijuana rhetoric is a good bit more muted on the surface, modern drug prohibitionists continue to insist that cannibis is the "gateway drug" leading to inexorable "shame, horror, and despair."

Figure 1: Early 1990's "Reefer Madness" poster

The War on Drugs from Nixon through Reagan

In Smoke and Mirrors former Wall Street Journal reporter Dan Baum dates the beginning of the modern War on Drugs in 1967 as then-Presidential contender Richard Nixon and his advisors looked for a winning election strategy in the face of the problematic Vietnam war that so vexed the nation. A tough-on-crime posture would serve, with illicit drug use an opportune focus:

> Two months before the election, Nixon stood in the shadow of Disneyland's Matterhorn and put the capstone in his law-and-order campaign by conjuring up a War on Drugs. "As I look over the problems in this country, I see one that stands out particularly," he told a rally of Republican supporters. "The problem of narcotics."

> Drugs, Nixon said, "are among the modern curse of the youth, just like the plagues and epidemics of former years. And they are decimating a generation of Americans." Half of all crime in New York, Nixon insisted, was committed by drug addicts. So his administration, he promised, would "accelerate the development of tools and weapons" to fight illegal drugs . . .
>
> "I believe in civil rights," Nixon concluded. "But the first civil right of every American is to be free from violence, and we are going to have an administration that restores that right in the United States of America."[19]

Among the tools the Nixon Administration would soon employ were drug-sniffing canine searches for marijuana possession by U.S. troops in Vietnam, a policy that begot the unforeseen consequence of increased heroin use (quoting a Pentagon researcher):

> . . . "Human ingenuity being what it is—and the desire for an intoxicant in Vietnam being what it was—many soldiers simply switched" to heroin, which was odorless, far less bulky than pot, and in Vietnam, extremely inexpensive.[20]

Field commanders would soon pine for the days when the relatively benign cannabis "weed" was the G.I. intoxicant of choice. The first drug testing machine, an opiate-detecting "behemoth the size of an office desk," would soon be deployed to address the far more serious heroin problem, and the era of mass drug screening was born.

The drug issue proved to have sturdy domestic political "legs" that to this day stride with a forceful gait. In the early 1970's, drug-related empirical hyperbole also

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[19] Dan Baum, Smoke and Mirrors, (1996, Little, Brown, & Co. NY), pp. 11-12.

[20] ibid., pg. 50.

took off with a zest that shows no signs of abating (more on this in Chapter 2). Politicians fell all over each other trying to up the ante. Senator Charles Percy of Illinois, trying to one-up the drug-crime statistics proffered by George McGovern, asserted that "[T]he total cost of drug-related crime in the United States today is around $10 billion to $15 billion." Virtually unnoticed went some inconvenient countervailing data:

> In fact only $1.28 billion worth of property was stolen in the United States in 1972 (the figure had actually fallen slightly from the previous year). That includes everything except cars, which junkies don't usually steal because they can't easily fence them, and embezzlement, which also isn't a junkie crime. The combined value of everything swiped in burglaries, robberies, and muggings, everything shoplifted, filched off the back of a truck, or boosted from a warehouse, was $1.28 billion. Yet during the heroin panic of Nixon's War on Drugs, junkies would be blamed for stealing as much as fifteen times the value of everything stolen in the United States.[21]

Equally hyperbolic was the resurgence of the "gateway drug" theory of marijuana use by the time Ronald Reagan took over the Presidency. Previously employed during the "reefer madness" antidrug campaigns prior to World War II, the gateway theory is but the classic *post hoc, ergo propter hoc* fallacy. Baum notes more inconvenient data:

> The gateway theory is lunatic. The number of Americans who have smoked pot has skyrocketed in the past 30 years—to as many as 70 million—while the number of heroin addicts is about the same in the mid-1990's as it was in 1970: about half a million.[22]

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[21] ibid., pg. 69.

[22] ibid., pg 70.

Just Say No

Ronald and Nancy Reagan would put the War on Drugs in high gear. First, there had to be a political make-over to neutralize the First Lady's image problem. As John Gilliom recounts:

> Public opinion polls suggested that Nancy Reagan was increasingly seen as a Marie Antoinette who partied with the wealthy and aspired to little more than expensive china and designer gowns . . . the White House staff apparently developed a consensus that the drug problem would provide a more useful and politically resonant issue for the first lady than her soon-to-be-forgotten Foster Grandparents program. Soon Mrs. Reagan was widely seen meeting with concerned parents, attending drug abuse conferences and counseling centers, and urging children to "just say no." Once her national Just Say No campaign was under way, writers for The New York Times and The Washington report [sic] that senior management made it clear that Nancy Reagan was no longer a safe target for cynical news coverage.[23]

Mrs. Reagan would subsequently be heard to opine during the course of her much-publicized "Just Say No" campaign that "there is no moral middle ground: indifference is not an option," and that drug users were "accomplices in murder."

Noted iconoclast author and Syracuse University Professor of Psychiatry, Dr. Thomas Szasz, in his recent book Our Right to Drugs, recounts in detail the 1980's history of what he views as an utterly sinister practice reminiscent of the Soviet and Red Chinese practice of "denunciation," one which got its "Joe McCarthy" rebirth in

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[23] John Gilliom, Surveillance, Privacy, and The Law: Employee Drug Testing and the Politics of Social Control, (University of Michigan Press, 1994), p. 29.

this country during the Reagan administration, and a practice that continues to this day:

> President Reagan claimed that he stood not only for family values, but also for less government. As an abstract proposition, he surely would have agreed that a person's loyalty to his family is more important and should be more enduring than his loyalty to a temporarily expedient government policy. But talk is cheap. When the Reagans' vaunted family values were put to the test of practical politics . . . They embraced one of the most characteristic and most despicable practices of the great socialist states of the twentieth century: turning children against their parents in a holy war against the enemies of the state.[24]

Szasz recounts a number of widely publicized episodes of children turning their parents in to the authorities for drug possession and use, noting how such tactics were (and continue to be) encouraged by law enforcement and other authorities. The Reagans themselves publicly applauded these acts, and the authorities responded with gusto:

From parents denouncing their children, children denouncing their parents, and students denouncing each other, it is only a small step to people denouncing neighbors and even strangers they suspect of using illegal drugs. This public-spirited act is now encouraged in many American communities. In 1990, Chattooga (Georgia) County's major newspaper, The Summerville News, added "drug coupons" to its pages, inviting readers "to fill in the names of suspected drug users and send them to the sheriff." In Anderson County, South Carolina, the sheriff put up

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[24] Thomas Szasz, Our Right to Drugs: The Case for a Free Market, (New York, Praeger, 1992), p. 78.

billboards that read: "Need cash? Turn in a drug dealer." Informers were promised 25 percent of the assets seized from any dealer they help arrest.[25]

The denunciation controversy continues, with recent allegations concerning the aggressive tactics used in the controversial D.A.R.E. (Drug Abuse Resistance Education) program.[26]

Reagan Administration Attorney General Edwin Meese, long an opponent of crime-fighting restrictions like the Miranda Rule, saw great potential in enlisting employers in the fight against illicit drug use through mandatory screening: "Since most Americans work, the workplace can be the chokepoint for halting drug abuse."[27]

Two additional key administration operatives also added their efforts to the Reagan drug war. First, Dr. Robert L. DuPont, a psychiatrist and Reagan "Drug Czar" who would go on to become a tireless advocate for the commercial drug testing industry (more on Dr. DuPont elsewhere in this thesis). Second, the highly visible and forceful Dr. William Bennett, also to become a Reagan "Drug Czar," despite his

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[25] ibid., p. 83.

[26] Steven Glass, *Don't You D.A.R.E.*, March 3, 1997, The New Republic, [http://magazines.enews.com/magazines/tnr/textonly/ 030397/ txtglass030397.html], March, 1998.

[27] Gilliom, op cit., p. 35, Meese quoted originally in NY Times, October 31, 1986. Reagan administration disdain for due process "technicalities" was no secret. President Reagan once dispatched his Attorney General to appear on ABC's *"This Week With David Brinkley,"* whereupon Mr. Meese, arguing the case for emasculating the Miranda Rule, offered that "I've never known of too many suspects who weren't guilty; if you're not guilty, you're not a suspect, by definition. That would be contradictory."

lack of training and experience in areas such as law enforcement and public health. Dr. Bennett saw illicit drug use in simple black and white: it was a moral issue, one bound to the dictates of authority. Once authority had spoken on drug use by declaring certain substances off-limits, users should suffer the penalties for transgressing. Bennett would brook no discussion of social or epidemiological "root causes" and "victimless crime" concepts. Drug users should pay dearly. Pay with their freedom, pay with their jobs.

> Compliance, not health, was the real issue. "Now that the government has spoken to the subject that drugs are unlawful," said Paul McNulty, a Bennettista soul-mate directing communications at the Justice Department, "a person who disobeys the law has made a moral choice and should be dealt with appropriately." Bennett freely admitted drug enforcement was but an instrument of a wider agenda, calling for "the reconstitution of legal and social authority through the imposition of appropriate consequences for drug dealing and drug use." "The drug crisis," he told the Washington Hebrew congregation, "is a crisis of authority, in every sense of the term, 'authority'."[28]

While Bennett disdained any epidemiological analyses or addiction disease-model theories of drug use, he was not against using the epidemiological model when it suited his purpose. Dan Casse, a Bennett assistant, one day proposed a "contagion" model that might prove useful:

> I studied under James Q. Wilson at the Kennedy School . . . He posits a contagion model. It isn't hard-core users that spread drug abuse, because everyone can see that they're a mess and nobody wants to be like them. Instead, it's the casual user, the one whose life hasn't fallen apart that is the vector for drug abuse, because he makes it look like you can use drugs and not pay a price.[29]

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[28] Baum, op cit., p. 266.

[29] Baum, op cit., pp. 272-3.

In Epi-speak a "vector" is an organism that transmits a pathogen through the environment. The mosquito is the principal malaria "vector," and so on. So, the otherwise prosperous and productive casual drug user could be targeted as a disease "vector" that had to be "quarantined" through tactics like drug screening and harsh economic legal sanctions. "I like it," Bennett said.[30]

In other words, "do not set a bad example, or we will ruin your otherwise nice life for you."

In 1986 Ronald Reagan issued *Executive Order 12564* ("Drug-Free Federal Workplace Order") which is generally regarded as a watershed event in the history of employee drug testing. A telling passage in E.O. 12564 makes perfectly clear the intent of his action:

> The use of illegal drugs, on or off duty, by Federal employees is inconsistent not only with the law-abiding behavior expected of all citizens, but also with the special trust placed in such employees as servants of the public.

The "law-abiding behavior expected of all citizens . . ." Such compliance was to be enforced through the use of the employee drug test. Steven L. Nock observes:

> Indeed, the testing component is the only significant part of this executive order. Illegal drugs, by definition, are illegal, so there was little an Executive Order could do about enforcement of existing laws. Clearly, existing judicial practices were perceived by the President to be ineffective. Executive Order 12564 must be seen as a statement

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[30] Baum, op cit., p. 273.

> that normal judicial procedures were inadequate: only extreme measures, in this case drug tests, would do.[31]

Once federal employees were ordered into routine laboratory scrutiny, legislation aimed at the private sector would not be far behind. The 1988 Drug-Free Workplace Act (41.USC.701 et seq.) is generally cited as justification for non-cause drug testing programs in the private sector. It requires that any business or institution receiving $25,000 or more per year in federal funds—directly or "indirectly"—have in place a documented "drug-free work place" program. While most administrators and executives are led to assume that the Act requires drug testing, the reality is that there is not one word in the legislation requiring nor even recommending testing. The act basically mandated that an elaborate "Just Say No" program exist on paper. The authors of the National Academy of Science Under the Influence? report observed that "Contractors were not required to implement a drug-testing program, but could do so in order to demonstrate compliance."

As we shall see in detail elsewhere in this work, however, legislation is afoot in Congress to put some teeth into workplace drug prevention by explicitly requiring drug testing throughout the public and private sectors. Leading the charge in the effort is the self-appointed Field Marshal of the War on Drugs, New York Representative Gerald B.H. Solomon.

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[31] Steven L. Nock, The Costs of Privacy: Surveillance and Reputation in America, (New York, Aldine DeGruyer, 1993), p. 100.

Recent workplace drug abuse policy rhetoric environment

As noted earlier by William White, policy advocates frequently employ the "War" metaphor (e.g., "War on Poverty," "War on Cancer," etc.) to underscore the urgency of their causes. Where drug abuse is concerned, "war" goes far beyond rousing imagery, with Constitutionally debatable paramilitary activities undertaken in foreign nations and aggressive military-style armed actions against domestic drug marketeer suspects.

Moreover, the political and peer pressure to get on board and publicly demonstrate a home-front commitment to the War on Drugs causes otherwise reasonable people and organizations to indulge in ill-considered measures. For example, in 1994 Mellon Bank in Pittsburgh enacted a random drug testing policy, complete with an anonymous tip phone line. Mellon officials insisted "Nothing is wrong. [The bank] hasn't lost large sums of money to fraud, or seen a sudden outbreak of violence in the workplace." Jim Fauzio, Mellon's Employee Assistance Program (EAP) Manager, allowed that the program "was not in response to any specific problem or event." Mellon officials claimed their intent as simply that of good, concerned corporate citizens.[32] Similarly, the Charlotte, North Carolina Chamber of Commerce joined in 1994 in a hard-sell campaign to encourage all employers in the area to begin drug testing. Their literature included the

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[32] Steve Massey, *Pittsburgh-based Mellon Bank to Start Drug Tests of Employees Already Hired*, June 23, 1994, and *Mellon Bank Defends Anonymous Tip Line, Drug Testing*, June 27, 1994, Pittsburgh Post-Gazette (Knight-Ridder/Tribune News Service).

exhortation: "Don't be the last company to start drug testing."[33] Hewlett-Packard also succumbed, taking the policy a step further to include even the company's independent contractors; San Francisco-based technical writer Bill Knutson had worked for HP for years in a contracting capacity, working offsite using his own computer equipment. The company informed him in 1995 that henceforth he would have to submit to drug testing as a condition of further work assignments. HP public relations official Mary Lou Simmermacher said simply that "the company decided to follow the lead of other companies" in enacting the drug testing policy. She offered no information indicating that a drug abuse problem existed at Hewlett-Packard Corporation.[34]

Drug and Alcohol treatment centers, always on the lookout for opportunities to fill empty, expensive beds, eagerly joined in. A typical pitch is seen in the media campaign by Peninsula Hospital of Knox County, Tennessee, whose primary advertising slogan in the late 1980's and early '90's was "We Can Help Even Those Who Don't Want Help." Implicit in the appeal: "Turn your loved ones and acquaintances in, for their own good. Just remember to bring their insurance cards."[35]

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[33] Tawn Nhan, *Drug Tests Becoming the Norm, Now Smaller Firms are Taking the Step*, January 31, 1994, The Charlotte Observer Workplace Column (Knight-Ridder/Tribune Business News).

[34] San Francisco, Newsbytes News Network, *Political Action On Internet Over HP Drug Tests*, June 10, 1994, [http://www.nbnn.com/], March, 1998.

[35] There is what should be an obvious reason why the typical residential "D&A" (drug and alcohol) treatment program involves a 30-day stay; the conventional health insurance "substance abuse" benefit clause pays for up to a 30-day encounter, irrespective of the longitudinal therapy needs of the patient.

One last example of this phenomenon: The leading commercial drug testing vendor in Las Vegas has repeatedly run a large, multi-column newspaper display ad admonishing, in bold letters, that "If you're not pre-employment drug testing, you're hiring the rejects of those companies that do." No data are, however, provided to buttress such a blanket assertion, an allegation some might consider a libel toward the predominantly drug-free workforce. At the very least, such a broad claim constitutes false advertising, given what we know about reasonably estimated drug use prevalence rates in the work place.

Dissent disallowed

Naive business policies aside, the more important casualties of our drug siege policies include our democratic tradition of open debate of policy alternatives. Wartime gag rules are advocated; Lee Brown, former head of the U.S. Office of Drug Control Policy, immediately reacts on national TV to reports of Surgeon General Joycelyn Elders' statement proposing scientific study of legalization issues by stating that "there will be no discussion of the legalization of drugs; even the discussion is harmful." Former "Drug Czar" William Bennett asserts that "responsible intellectuals shouldn't discuss the possibility of drug legalization." Former Los Angeles Police Chief Darryl Gates, testifying before Congress, argues that even casual drug use is "treason" and that such users ought be "taken out and shot." (He later assures reporters that he is not merely indulging in hyperbole.)

Or note the reaction to a federal commission report recommending the equalization of sentencing guidelines pertaining to criminal convictions involving

"crack" a.k.a. "rock" cocaine versus the powdered form. The panel observes that, while the pharmacological effects of crack use are clinically equivalent to those of powdered cocaine, prison terms for crack offenders are many times more severe than are those involving powdered coke; in addition, nearly all crack cocaine convictions involve black defendants, whereas the majority of powdered cocaine offenders are white. Since white cocaine offenders are, on average, subject to far less severe prison sentences, and, are much more likely to be diverted to "treatment" than are blacks, some have argued that the current policy is inherently racist. President Clinton, smarting from charges of laxity and anxious to appear "tough" on the drug issue, curtly dismisses the commission's recommendation out of hand:

The White House
Office of the Press Secretary
For Immediate Release October 30, 1995
Statement By The President

> Today I reject United States Sentencing Commission proposals that would equalize penalties for crack and powder cocaine distribution by dramatically reducing the penalties for crack . . . I am not going to let anyone who peddles drugs get the idea that the cost of doing business is going down.

President Clinton would soon thereafter exhort first-time teen-age driver's license applicants to step up and show their support, and "do the right thing" to set a good example by voluntarily submitting to drug testing as a condition of licensing.

Chapter Summary

The foregoing provides but a brief yet sufficient overview of the history and political climate that comprise the "background noise" of drug policy. a psychic pollution which contaminates and frustrates all attempts at rational and ethical policymaking in this area. We continue in Chapter Three with a look into the lamentable state of recent and contemporary drug policy data gathering and analysis.

CHAPTER THREE

Estimating the extent and cost of workplace drug abuse: The epidemiology of illicit intoxication

In Chapter 2 we briefly reviewed the historical drug abuse policy "data" that help explain our social and political readiness to adopt Constitutionally dubious surveillance measures such as suspicionless drug testing. In this chapter we examine the techniques of drug use epidemiological analysis, principally as employed by pro-drug war partisans and their accomplices. Proponents of mass drug testing insist that our nation is besieged by a horde of drug-impaired citizens. A close examination of their methods of data collection and analysis refutes the claim.

Quantification and assessment of the extent and impact of illicit drug use involve analyses of empirical data culled from a variety of sources including databases of hospital and clinic encounters, epidemiological studies conducted by institutions such as the U.S. Centers for Disease Control (CDC), the National Institutes of Health (NIH), the U.S. Substance Abuse and Mental Health Administration (SAMHSA, formerly NIDA, the National Institute for Drug Abuse), as well as studies undertaken by a host of university research centers (e.g., CASA, the Center for Alcohol and Substance Abuse research at Columbia University) and

advocacy groups and private foundations such as the Partnership for a Drug-free America and the Robert Wood Johnson Foundation.

The scientific quality of these investigations runs the gamut, from the dispassionately professional and meticulous to the patently absurd and propagandistic. One encounters estimates of the "prevalence" (i.e. proportion, or rate) of drug-using employees that vary wildly, from a low of one or two percent to statements asserting that "Recent government statistics reveal that 1 out of 6 workers has a drug problem" (from a Psychemedics hair test marketing brochure) or that "Estimates of on-the-job cocaine use (including crack) range *from 10% to 50% of all employees.*"[36]

A favorite tactic of some anti-drug advocacy groups seeking to inflate the apparent extent of the "problem" involves the aggregation of data covering prescription, over-the-counter, and illegal drugs, as well as alcohol and tobacco statistics, to be reported under the hazy rubric of "substance abuse" or "consumption of illegal and abused drugs." For example, see "*Alcohol and Other Drugs in the Workplace.*" a page of statistical assertions proffered by NCADD, the National Council on Alcoholism and Drug Dependence, Inc.[37] Their data overwhelmingly concern alcohol abuse, with the word drugs seemingly thrown in the mix for its marquee value. No instructive breakdowns are provided, i.e., alcohol

[36] Angela B. Miller, Working Dazed: Why Drugs Pervade the Workplace and What Can Be Done About it, (New York, Plenum Press, 1991), pg. 15., emphasis mine.

[37] National Council on Alcohol and Drug Dependence, Inc., *Alcohol and Other Drugs in the Workplace*, [http://www.ncadd.org/workplac.html], March, 1998.

vs. "drugs," and within "drugs," no stratification by type of drug ("licit" vs. "illicit," by each substance?). Another example: Joseph Califano's CASA reports that "92% of substance abuse-related health entitlement costs is spent to treat the consequences of tobacco, alcohol, and drug abuse. Only 8% is spent to treat alcohol, drug, or tobacco dependence." Note again the generality. Visit the CASA internet web page (www.casacolumbia.org/costs/menu1.htm) wherein these obfuscatory data reside.[38] Observe in particular the artsy left-hand margin wallpaper montage, replete with totemic rolled-up $100 bill and powdered "cocaine" down the page aside the lengthy conglomerate litany of "tobacco, alcohol, and drug" statistics.

Where, one might rightfully wonder, are the Joe Camel™ and Johnny Walker Red™ renderings? A curious omission, given that a recent Califano article quotes the very same 1993 JAMA epidemiologic data cited by Ron Kotulak's Inside the Brain. Recall our introductory chapter characterization of illicit drug mortality experience as a "relatively minor epidemiological concern" in the context of other, much more prevalent and severe sources of substance abuse harm.

> Our leaders and citizens focus on the top killers: heart disease (720,000 deaths in 1990), cancer (505,000), stroke (144,000), accidents (92,000), emphysema (87,000), pneumonia and influenza (80,000), diabetes (48,000), suicide (31,000), chronic liver disease and cirrhosis (26,000), and AIDS (25,000). But they give scant attention to the causes of these killers, which, according to a 1993 Journal of the

[38] Center for Alcohol and Substance Abuse, Columbia University, [http://www.casacolumbia.org/costs/menu1.htm], March, 1998.

> American Medical Association study, include tobacco (435,000 deaths), alcohol (100,000) and illicit drug use (20,000).[39]

A last and fairly recent example of tobacco/drugs/alcohol conflation reveals the intractability of this "addiction" to data fog. The 1997 book Drug-impaired Professionals, opens its Preface with the assertion that "[D]rug abuse is at least as prevalent among highly regarded professionals as among the general public." This sentiment is shortly thereafter echoed in a chapter one section heading entitled *Addiction: An Equal Opportunity Destroyer*. The body of this work, however, once again provides the vague, mostly alcohol-referent rhetorical goulash heretofore surveyed:

> Hickey (1990, p. 37) contends that many attorneys have difficulty admitting to themselves that they cannot manage their drinking . . .
>
> Airline pilots also "tend to see themselves as invincible. They see themselves as different from the average citizen because they are in a super-responsible position" an airline employee-assistance program (EAP) representative remarked. "I'm a cracker-jack pilot," reasoned a pilot (age 45). "It can't happen to me. I'm not a skid-row character." A treatment expert described the addicted pilot's attitude like this: "How can I be an alcoholic when I'm the captain of a 747 aircraft." . . .
>
> The impact of substance abuse on professionals and their associates can be devastating. Obsession with alcohol and other drugs undermines physical and mental health; it also diminishes and destroys professional lives . . . An interview study of 86 pharmacists recovering from chemical dependency found that 44 had been arrested, and 24 had spent at least one night in jail. Forty five had experienced unemployment because of drinking or other drug use . . .
>
> Millions of Americans suffer and die from alcohol and drug abuse that often goes undiagnosed and untreated. About 43 percent of U.S. adults (76 million people) have been exposed to alcoholism in their

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[39] Joseph Califano, *It's the Drugs, Alcohol, and Tobacco, Stupid*, internet, http://www.casacolumbia.org/media/stupid.htm

> families. They either grew up with, married, or had a blood relative who was an alcoholic or a problem drinker (Schoenborn 1991) . . .
>
> A national probability sample of U.S. households . . . found that 52 percent of Americans age 12 and older had used alcohol during the month preceding the survey . . .
>
> Little is known about how many commercial airline pilots use marijuana and other illicit drugs, but a serious alcohol problem clearly exists . . .
>
> A national study of 3,338 law students at 121 accredited U.S. law schools found that 14 percent had drunk alcoholic beverages 10 or more times during the previous month, and 3.8 percent admitted to daily use.[40]

The foregoing is but a sampling of the murky "substance abuse" assertions that purport to sustain this work. Speaking of "sampling"—how, we might ask, did this author arrive at his conclusion that "[D]rug abuse is at least as prevalent among highly regarded professionals as among the general public"? Coombs describes his epidemiological methodology in the third paragraph of his Preface:

> From 1992 through 1995 my assistants and I spoke with 91 addicted professionals (66 men and 25 women)—21 physicians and medical students, 11 dentists, 13 pharmacists, 12 nurses, 21 attorneys, and 13 pilots; 10 experts (12 men and 7 women) who assist them in recovery; and 5 other people who felt that others might benefit from their experiences . . . [41]

Under the Revival tent, such is called the "leap of faith." Under the Big Top, it is known as "working without a net." In science it is simply called "anecdotal"—an

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[40] Robert H. Coombs, Drug-impaired Professionals, (Cambridge, MA, The President and Fellows of Harvard College, Publishers, 1997), pp. 14-35.

[41] ibid., preface.

insufficient "n," with the corollary liability of built-in sampling bias: ungeneralizability, in a word.

Coombs offers up a curious conclusion in his Epilogue:

> Tobacco and alcohol, the most widely used drugs, though legal cause more misery than all illicit drugs combined.[42]

Precisely a central point of this thesis. War on Drugs partisans are utterly disinterested in such an observation, however. They are certain to brandish this type of book (title prominently displayed for the cameras) as if it were one more (illicit) drug abuse Dead Sea Scroll justifying extreme countermeasures against everyone.

Valuing the drug abuse "losses"

Solid estimates of drug abuse prevalence are difficult enough to come by, but when we get to the appraisal of "economic losses" attributable to drug use, it often seems that policymakers just pick a large round number out of thin air with which to argue for public and political support. In the preamble to the 1988 federal "Drug-Free Workplace Act," Congress summarily "finds" that drug abuse is "prevalent" and that it costs the U.S. $100 billion dollars per year in health, safety, and productivity "losses." Where does such a figure originate? Scientific American writer John Horgan explains one way to derive it:

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[42] ibid., p. 281.

> Two years ago Walsh [J. Michael Walsh, then NIDA Research Director] testified in federal court that the "cost of drug abuse to U.S. industry" was nearly $50 billion a year, according to "conservative estimates." This claim is a staple of anti-drug rhetoric. It is frequently quoted without qualification by the media, and last year President Bush rounded it up to "anywhere from $60 to $100 billion." Here's how the figure was derived. In 1982 NIDA surveyed 3,700 households around the country. The Research Triangle Institute (RTI), a NIDA contractor in North Carolina, then analyzed the data and found that the household income of adults who had ever smoked marijuana daily for a month (or at least 20 out of 30 days) was twenty-eight percent less than the income of those who hadn't. The RTI analysts called this difference "reduced productivity due to daily marijuana use." They calculated the total "loss," when extrapolated to the general population, at $26 billion. Adding the estimated costs of drug-related crimes, accidents, and medical care produced a grand total of $47 billion for "costs to society of drug abuse."[43]

Such empirical "reasoning" is all too common, the "correlation = causality" disease of the statistically credulous (many of whom are supposedly experts in their fields). Horgan wryly asked " . . . by similar logic, should we conclude that Thunderbird wine hurts productivity but Chivas Regal scotch helps it?"

This type of inept inquiry and baseless calculation is nothing new. Recall from Chapter 1 Dan Baum's account of impossible drug-related theft totals bandied about in the early 1970's. Another example of this type of data inflation is detailed in a 1971 monograph entitled *The vitality of mythical numbers*,[44] in which author Max

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[43] John Horgan, *Your Analysis is Faulty*, The New Republic, April 2, 1990, p. 22.

[44] Judgment Under Uncertainty: Heuristics and Biases, Kahneman, Slovic, and Tversky, Ed., (Cambridge, Cambridge University Press, 1982), pp. 408-13. NOTE: When confronted with an assertion such as "70% of all criminals used illegal drugs prior to arrest," it is important to remember that 100% of them are also likely to have consumed water a short time prior to their arrests (and, all were "under the influence" of oxygen at the time they were detained). With respect to "gateway" substances, virtually all marijuana smokers started out on breast milk or Similac.

Singer evaluated a popular claim of the day alleging that "It is generally assumed that heroin addicts in New York City steal some two to five billion dollars worth of property a year . . . " A careful look through all pertinent sources of data led Singer to the conclusion that the "$2-5 billion" figure, while not inconsequential in absolute terms, was high by about a factor of ten.

While no intellectually honest person can deny that drug abuse is a serious social problem, no one truly knows what the prevalence and costs of illicit workplace drug use are with any sort of precision. The most disinterested, objective, and comprehensive study to date was recently concluded by the National Academy of Science's (NAS) National Research Council and the Institute of Medicine. Their 1994 hardcover report Under The Influence? Drugs and the American Workforce delivered the following among their principal findings and recommendations:

- Most alcohol and other drug users do not develop patterns of clinically defined abuse or dependence.
- Any program that addresses drug use by the work force should include alcohol , the drug most associated with perceived detrimental job performance, *as a priority*. (emphasis mine)

Moreover, it is, after all, a blinding glimpse of the obvious that those who engage in criminal activity will likewise have little regard for anti-drug laws. What is not clear, however, is that their drug use uniformly caused them to pillage and plunder.

The confusion of correlation and causation is probably the most frequently committed inductive error. Illicit drug use may indeed correlate significantly with all manner of workplace malaise, but it also correlates highly with alcohol use, tobacco use, poor diet, lack of exercise, and sleep disorders, to cite a handful of major factors. Such inter-correlations indicate a more global "factor"—call it "dysfunctional lifestyle"—that predicts poor performance even more effectively. Singling out one element of such a syndrome for coercive suppression will inevitably fail to lead to our indisputably laudable goals of improved health, safety, and productivity.

- Widely cited cost estimates of the effects of alcohol and other drug use on U.S. productivity are based on questionable assumptions and weak measures . . . Business decision makers and policy makers should be cautious in making decisions on the basis of the evidence currently available.[45]

With respect to this last point, it is clear that some policy makers have not gotten the message. Witness the remarks made by Representative Gerald Solomon (R-NY) on the opening day of the first session of the 104th Congress, in a screed entitled "*Redeclare the Drug War*":

> Mr. Speaker, we cannot solve the crime and violence problems which plague this country without an all-out war on drugs. Make no mistake about it. This Republican-controlled Congress will play a major role in the war on drugs . . . The root cause of crime and violence in this country is illegal drugs. Look at the facts. According to the Partnership For A Drug-Free America: Drug use is related to half of all violent crime; Illegal drugs play a part in half of all homicides, in fact 48 percent of all men arrested for homicide test positive for illicit drugs at the time of arrest; Over 60 percent of prison inmates are there for drug-related crimes; Illegal drug use is a factor in half of all family violence. Most of this violence is directed against women; Over 30 percent of all child abuse cases involve a parent using illegal drugs; The number of drug exposed babies now accounts for 11 percent of all births in the United States; Over 75 percent of adolescent deaths are a result of drug-related violence. An important step in curbing drug demand in this country is to make the so-called casual users and hard-core users accountable. The best method to accomplish this involves testing in the workplace . . . the legislation introduced today is a starting point of the action this Congress must take to turn around the war on drugs, including: A bill to require random testing of all executive, judicial, and legislative branch Government employees and officials; A bill to deny certain benefits upon conviction of certain drug offenses; A bill to ensure quality assurance of drug testing programs; A bill to require employer notification for certain drug crimes; A bill to require mandatory drug testing for all Federal job applicants; A bill to provide the death

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[45] J. Normand, R. Lempert, R., C. O'Brien, ed., Under The Influence? Drugs and the American Workforce, (Washington DC, National Academy Press, 1994), pp 3-13.

> penalty for drug kingpins: A bill to deny higher education assistance to individuals convicted of using or selling drugs . . . [46]

On April 6, 1995 Mr. Solomon repeated his litany of drug casualty statistics in another House speech, with a couple of embellishments: instead of 11 percent of all live U.S. births being "drug-exposed," he now claimed that "Today, 1 out of every 10 babies born in the United States *is addicted to drugs*" [emphasis mine] and asserted that "The nation's health care system is straining from the war on drugs with nearly 500,000 drug-related hospital emergencies a year."[47] Given that U.S. Census Bureau figures on live births are 4,086,000 for 1994, Solomon implies an excess of 400,000 "drug-addicted" American newborns annually, an obstetrical disaster of major proportions that would be continuously blaring front-page news.

Were it in fact the case. Mr. Solomon acquires his "data" from The Partnership For a Drug-Free America and, no doubt, from its kindred and empirically incestuous advocacy brethren. A half-million druggie newborns a year? (the foregoing 10-11% figures.) Well, if we return for a moment to CASA and *It's the Drugs, Alcohol, and Tobacco, Stupid*, we find Mr. Califano claiming that "[T]he more than 500,000 newborns exposed each year to drugs and/or alcohol during pregnancy is a slaughter of innocents of biblical proportions." Once again: "Drugs-and/or-Alcohol."

This is mantra, not measurement; allegory posing as analysis. Respectable empirical information is more likely to come from places like the CDC (U.S. Centers

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[46] Hon. Gerald Solomon, *Extension of remarks*, Congressional Record, January 4, 1995

[47] *Extension of remarks*, Congressional Record, April 6, 1995

for Disease Control). On October 18, 1996, for example, CDC reported the findings of a 1994 Georgia Department of Human Resources pregnancy drug abuse study. Georgia health officials had anonymously tested every newborn in the state during a two-month period, and found 1 in 200 had been "exposed" to cocaine before birth. One half of one percent "exposed," however arguably unrepresentative of the aggregate national obstetrical experience (and confined to assay for cocaine metabolite), is a very long leap from Solomon's "10% addicted."

The Georgia data are available in full on the internet in the CDC Weekly Mortality and Morbidity Report, Volume 45, No. 41, October 18, 1996, located on the internet at ftp://ftp.cdc.gov/pub/Publications/mmwr/wk/mm4541.pdf.

Drug abuse data "coding" issues

All medical encounters are recorded and classified through standardized coding protocols. Everything diagnosed about or done to a patient is coded. Hospitals use the ICD-9-CM system, individual practitioners employ the CPT system. Computerized reimbursement systems rely on these codes for automated payment of charges, and "code gaming" (coding clinical episodes with an eye toward at once minimizing oversight and maximizing payment) has evolved into a fine art. Those who research clinical data repositories via computers face significant accuracy challenges.

To illustrate: When we probe hospital records for cases coded as "drug-related" encounters, in addition to illicit drug trauma, we find everything from acute alcohol

intoxication to accidental poisonings to suicide attempts to "ADRs," or "Adverse Drug Reactions," which often means allergic reactions to therapeutic agents legitimately administered (the single largest category of "drug-related emergencies"). For example, a search for "drug-related" episodes in the 152,964 cases comprising the 1993 Nevada statewide hospital database turned up 4,619 cases, 3,730 of which turned out to be alcohol-related, and of the 889 remaining, only 237 could be legitimately classified as "acute (illicit) drug admissions." Lacking national data at the moment, one *could* extrapolate linearly and multiply those 237 by the ratio of the U.S. population to Nevada's (roughly 250/1.5 million, or 167), so 237 x 167 = 39,579. We might even throw in a comfortable pad and round up to 50,000, and, voila—one tenth of Representative Solomon's estimate. Recall Disraeli's lament: "*Lies, damned lies, and statistics.*"

Regarding "drug-addicted" neonates, the 1993 Nevada hospitalization data contain 19,997 records coded for "live birth." Of those, 104 had "fetal/newborn" drug-related diagnostic codes, 30 of which were ICD-9-CM code 760.71, or Fetal Alcohol Syndrome. In light of the foregoing CDC Georgia data let us do a little quick math: 104 less 30 is 74, which when divided by 19,997 is 0.0037, or slightly less than one half of one percent.[48]

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[48] Tip: Want to inflate the apparent extent of drug abuse encounters? Hypothetical (and possibly representative?) case: A couple are out partying. They get quite drunk, smoke some pot, snort a bit of cocaine, and become involved in an injury automobile accident on the way home (the proximate cause of which was the alcohol). At the hospital (not to mention any and all follow-up clinical encounters) they generate a host of ICD-9 codes for every diagnosis and treatment. Two people involved in one incident have now contributed possibly dozens of "drug-related" codes that will become the grist for drug abuse prevalence "researchers" eager (or

In fairness, the Nevada Claims Database I used (Source: UNLV Center for Public Data Research) does not contain all possible diagnostic and procedural codes that could accompany a given encounter, so my queries may indeed undercount the phenomenon slightly. But the principal codes are captured (including those pertaining to emergency room episodes), so these numbers are probably not off by much. The point is that acquiring solid epidemiological data is no easy task, one beyond the grasp of Congressman Solomon and his "sources."

The interested reader can examine in detail the diagnostic codes of interest in recent federal national hospitalization data contained in the Detailed Diagnoses and Procedures, National Hospital Discharge Survey, 1994,[49] published by the National Center for Health Statistics (NCHS). This report tabulates an annual estimate of acute-care hospital encounters, by "first-listed" ICD-9 diagnostic codes (a.k.a. the "principal dx"). A couple of summary observations: Legitimate drug-related encounters were estimated at 153,000. The alcohol-related estimate totaled 356,000. These represented 0.5% and 1.15% respectively of the total estimated 30,843,000 hospitalizations. Two conclusions should be evident after even brief consideration. First, there is essentially no such thing as an "acute tobacco-related admission." (although we do in fact see a dx of 305.1, with 8,000 cases listed as "non-dependent

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merely naive enough) to inflate the numbers concerning illicit drug morbidity by counting each code hit as a "drug-related encounter."

[49] Edmund J. Graves and Brenda S. Gillum, Detailed Diagnoses and Procedures, National Hospital Discharge Survey, 1994, U.S. Department of Health and Human Services Publication PHS 97–1788. Vital and Health Statistics, Series 13, Data From the National Health Survey, No. 127, (Washington, DC, USDHHS, 1994).

drug abuse, tobacco," and tagged with the caveat "to be used with caution." These cases are most likely those of adolescents unhappily regurgitating their clandestine Marlboro adventures.) The damage caused by tobacco consumption, however, will be found sprinkled across a host of other codes identifying costly and severe maladies such as emphysema (dx 492), oral/ trachial/ esophageal/ lung cancers (numerous codes), COPD (dx 496, Chronic Obstructive Pulmonary Disease), and cardiovascular ailments (dozens of codes). Similarly, alcohol damage will be evident in liver, renal, gastrointestinal, and neurological ailments, to cite a few. Simple "principal dx" code counting, therefore, provides a misleading picture of the relative impacts of various lifestyle-related medical misfortunes.

Another important point: the authors of this report are careful to point out that their ICD-9 code frequency breakdowns reflects *encounters*, not individual patients. Since a relatively high proportion of medical services are rendered to chronic, repeat patients, it is easy to overestimate the prevalence of a condition if the databases are stripped of patient identifiers for confidentiality reasons, and code "hits" are summarily tabulated (recall that "prevalence" denotes the percentage of individual patients with a condition). The federal D.A.W.N. (Drug Abuse Warning Network) reports, which estimate "drug-related emergency encounters," contain a similar disclaimer. The D.A.W.N. report also acknowledges that the medically indigent typically use emergency rooms as primary care facilities. If, for example, a welfare client or homeless person is treated at the E.R. for the flu or some other relatively minor ailment and suffers an "ADR" (Adverse Drug Reaction), or is simply detoxed

for alcohol abuse, his or her codes may readily end up in a sloppily designed and executed "drug-related emergency" tabulation.

But surely, one might object, researchers are competent and vigilant against such naiveté, right? Recall our earlier assertion regarding estimation of the nature, extent, and cost of drug abuse: "*Upon close critical examination, serious questions emerge concerning the reliability of the data, most of which are gathered and disseminated by "War On Drugs" partisans intent on buttressing foregone conclusions.*" Consider the following recent news item:

> Drug Statistics Questioned
>
> When any kind of a revelation about drug abuse trends are made public, so too are the statistics backing up the statement. But some critics charge these numbers are just estimates that in no way should have an impact in making future drug policies, the New York Times reported April 20.
>
> Drug statistics first became prominent in 1978, with the creation of the National Narcotics Intelligence Consumer Committee. Mark A.R. Kleiman, a drug policy expert at the University of California at Los Angeles and chairman of the committee calls the process "estimation by negotiation." Kleiman says officials typically sit down and debate what the numbers should be.
>
> Peter Reuter, a drug policy specialist at the University of Maryland, says the numbers are irrelevant "because they play virtually no role in shaping the nation's drug policies." And some contend the figures are merely a way to distract attention from the root cause of the problem. Just last year, an annual survey conducted by the University of Michigan reported that half of high school seniors admitted they have used drugs, up 20 percent from 1992. The study showed that the majority of young people are not hard drug users since most students said they experimented with marijuana. Of the students surveyed, less than 2 percent of seniors said they had used cocaine in the previous month and 0.6 percent said they had used heroin.

> Eric D. Wish, director of the Center for Substance Abuse Research at the University of Maryland, is also highly critical of the statistics. Recently he wrote, "What is not so obvious is that the federal agencies that produce these statistics are also agents of the administration in power, and are not immune from pressures to interpret national drug statistics consistent with the ruling administration's view."[50]

Need more? No problem; consider the most recent examination of the drug data dubiety issue from The Washington Post:

> Number Jumble Clouds Judgment of Drug War
> Differing Surveys, Analyses Yield Unreliable Data
>
> Washington Post Page: A01. Jeff Leen, Washington Post Staff Writer. Friday, 2 Jan 1998
>
> . . . In spending a proposed $16 billion on the federal drug war in 1998—a 400 percent increase since 1986—lawmakers will rely on reams of data that often attempt to impose statistical order on a chaotic social problem that defies easy analysis. Extensive federally funded efforts to accurately assess the subterranean drug world have led to contradictory findings and occasional statistical curiosities, such as a 79-year-old female respondent whose avowed heroin usage in one survey resulted in a projection of 142,000 heroin users, 20 percent of the national total.
>
> "It's clear that these things are badly mismeasured and nobody cares about it," said Peter Reuter, the former co-director of drug research for the non-profit RAND think tank and now a University of Maryland professor. "That's because drug policy isn't a very analytically serious business."
>
> Measuring the drug war with any precision is a daunting task. Hard-core drug users are hard to find, much less question, and people frequently lie on drug-use surveys—one study shows two-thirds of teenagers giving deceptive answers. Since surveys typically receive only a small number of positive responses, analysts risk making substantial errors in creating projections for the entire nation. Survey results sometimes include warnings acknowledging these obstacles, such as "subject to large sampling error" or "great caution should be taken."

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[50] Join Together Online, 4/25/97, [http://www.jointogether.org/], March, 1998.

> But the caveats often are downplayed or ignored, either by those issuing the data or by journalists and others promulgating the information. In reporting the apparent 1991 jump in habitual cocaine use, for example, the White House's Office of Drug Control Policy noted that the statistics were both "cause for concern" and "highly unreliable."
>
> The difficulty in measuring and evaluating the nation's illegal drug problem made it harder to set policy, stoked partisan rhetoric and confused the public, drug analysts say. Many experts, for example, believe cocaine and crack use are in decline, and the federal household survey indicates that overall drug use is down 49 percent from its peak of 25 million monthly users in 1979; yet many Americans still perceive the drug war as perennially lost.
>
> "You really can't tell from the big debate that goes on in public what the big picture is," said David Musto, a Yale University medical historian who has studied drug trends for three decades. "When I tell people about it, they're completely surprised by the fact there has been a decline since 1980."
>
> That big picture can be obscured by drug statistics that are "often incomplete, erratic and contradictory," in the words of two RAND researchers funded by the government to measure cocaine consumption. The first problem of drug war analysis is the sheer number of measurements—there are more than 50 federal drug-related "data systems" with hundreds of "drug variables" produced by an array of federal agencies . . .

With respect to drug testing specifically, the Post article notes problems with the Justice Department's DUF (Drug Use Forecasting) program, wherein "voluntary" urine samples are collected annually from 30,000 inmates from 23 cities around the nation. Politicians invariably rush to extrapolate from such data to come up with highly suspect estimates of the prevalence of various types of drug use nationally. A similar flawed approach to workplace drug prevalence estimation is noted by John Gilliom in Surveillance, Privacy and the Law: Employee Drug Testing and the Politics of Social Control who observes that:

> . . . it is the case that drug-testing programs have had the ironic effect of revealing far less illegal drug use among American workers than advocates of testing had estimated. Some reports have found positive rates of up to 8 or 9 percent in programs that primarily test workers who are suspected of drug use (meaning that roughly 8 or 9 percent of suspected workers, not all workers, test positive. Large government programs of random testing have found less than one percent of workers testing positive for illegal drug use.[51]

As noted elsewhere in this thesis, the American Management Association recently reported the aggregate national employee positive drug test rate at 1.9 percent (of all employees tested for whatever reason. Given that certain very low-prevalence employment strata have yet to enact indiscriminate drug screening policies, the overall rate would have to be even lower than that).

Clearly something is amiss: either the continuing official workplace drug abuse prevalence assertion of slightly more than 8 percent (10 million workers) is grossly exaggerated, or the testing process is hemorrhaging false negatives. Either way, we are wasting analytical resources.

"Health 'n' Safety 'n' Productivity" in the workplace: a quick pilgrimage to "Stonedhenge"

In in foregoing we examined some of the serious problems with the collection, analysis, and use of the policy data that undergird suspicionless drug testing policy. In closing this section let us here briefly dwell on two items which are among the Rosetta Stones of the "Health 'n' Safety 'n' Productivity" argument upon which

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[51] Gilliom, op cit., p.7.

coerced employment drug screening policies are ostensibly based: The "Bensinger" and "Firestone" studies of the early 1980's.

Peter Bensinger, former head of the Drug Enforcement Agency (DEA) and subsequently a "politically active supporter of testing and provider of industrial drug-testing consulting services,"[52] was hired by Georgia Power to develop and administer an aggressive random drug testing program at a GP nuclear power plant construction site. In his final report, he boasted of the program's dramatic effectiveness in reducing lost time accident rates. And who could argue with the data that accrued during the 5-year period (number of accidents per 200,000 man-hours):

1981 — 5.41
1982 — 2.09
1983 — 0.91
1984 — 0.61
1985 — 0.49

Impressive, incontrovertible proof of the efficacy of drug testing, right? Decimation of the accident rate (i.e., a better than 90% decline). What more can one ask? Indeed, Gilliom notes that the Bensinger study drew immediate accolades in the popular and legal press of the day as utter proof of the efficacy of drug testing.

Well, critics pointed out (to no avail) that the random testing program was not even put in place until April of 1984, by which time the accident rate had essentially bottomed-out. Moreover, the proportion of accidents "caused" by illicit drug use was

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[52] Gilliom, op cit., p. 39.

never established. Neither was the contribution of the overall safety and anti-drug awareness program, for GP had also introduced intense job safety-related procedures and training programs early on in the project. Finally, the largest rate drop occurred in the first two years as workers became more familiar with their jobs and workplace environment.

No matter: "proof" of the effectiveness of drug testing was at hand.

Firestoned

The Firestone Tire & Rubber Co. study is a granite empirical reliquary beloved by drug policy druids impelled to recursively intone that "drug users are almost 4 times as likely to be involved in plant accidents, 2.5 times as likely to be absent to for than a week, and 5 times as likely to file workers' compensation claims, and they receive 3 times the average level of such benefits,"[53] for these liturgical tabulations originated at Firestone.

Well, drug testing advocates now had drug abuse policy "proof of losses" firmly in the other hand. Never mind another small (and also ignored) factual inconvenience which Gilliom illuminates:

> While skeptical researchers have never been allowed to see the original data, it has been learned that the figures "refer only to alcoholics that have been served by the Firestone EAP [Employee Assistance Program - mine]." (Morgan 1988, 685) This study was therefore based on an analysis of individuals who had been sufficiently impaired to either volunteer for or be ordered into the professional counseling program. The extrapolation to all working

[53] Gilliom, op cit., p. 40.

> Americans who use illegal drugs—as The Partnership For a Drug-Free America and the U.S. Chamber of Commerce did—is entirely inappropriate. "The statistics generated . . . have nothing to do with drug users, recreational or otherwise." (Morgan, 1988, 685) Nevertheless, these figures are widely and repeatedly cited, creating a pseudoscientific impression of firm knowledge about the impact of drugs in the workplace.[54]

Given that in the late 1990's "no one seriously doubts" that illicit drugs kill millions of Americans each year: that 10% of all newborns are drug-addicted on arrival: that 1 in 6 workers has a drug problem: that hospital emergency rooms across the land have drug trauma cases occupying every gurney and stacked like cordwood out the doors and into the parking lots—well, the more things change in the drug war empirical strip mines, the more they remain the same.

Chapter summary:

In this chapter we have seen how partisans have "cooked the books" to exacerbate public anxiety and justify coercive countermeasures, of which indiscriminate drug testing is but one. Several principal methodological shortcomings of anti-drug researchers are glaringly apparent: [1] conflation of *illicit* drug use data with statistics relevant to vastly more prevalent *legal* intoxicants: [2] inappropriate generalizations from "addict" cohorts to the general population, and: [3] inappropriate correlation of overall drug *use* with drug use health, safety, and productivity losses.

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[54] Gilliom, op cit., p. 40.

In Chapter Four. we examine the myriad complexities of the science and business of analytical chemistry. Can the labs manage the current and proposed specimen workloads accurately and cost-effectively?

CHAPTER FOUR

The "science" and business of suspicionless drug testing

The public generally believes that laboratory science is "accurate" without ever giving much though to what the term truly means. Vendors of commercial drug testing services benefit from such naiveté, for a wider appreciate of the extent of the inherent indeterminism of laboratory science would not doubt increase venors' marketing difficulties. In this chapter we examine the methodological complexities of analytical chemistry and their implications with regard to two fundamental questions: [1] can commercial labs perform drug tests *en masse* inexpensively without falsely labeling people as "drug abusers" while otherwise detecting all users of illicit substances, and [2] is mass suspicionless drug testing an appropriate use of finite bioassay resources? The answer to the first question, as we shall see, is highly uncertain. The answer to the second is an emphatic *no*.

Private commercial laboratories performing the bulk of workplace drug testing hawk their services with a vengeance, sometimes holding free "seminars" in which drug abuse statistics of dubious lineage and merit are put forth as incontrovertible fact to heighten the sense of urgency among prospective clients. And, when pressed on concerns regarding false positive rates, lab spokesmen usually respond with

reassuringly vague statements such as "our lab methods are quite precise, our screening results are 99.9% accurate."[55]

Uncritical acceptance of such assertions is testimony to a widely-held naive faith in scientific exactitude:

> . . . science has assumed an increasingly powerful role in the execution of justice. Indeed, scientific testimony is often the deciding factor for the resolution of civil and criminal cases . . . As one juror put it after a recent trial in Queens, N.Y. "you can't argue with science."[56]

Those who work in analytical chemistry, however, know first-hand just how demanding the never-ending quest for accuracy and precision is, and how equivocal lab results can be in the absence of obsessive vigilance (and reasonable workloads). Mr. Neufeld was one of the defense attorneys defending O.J. Simpson in his criminal trial. The public has by now learned through the Simpson criminal case and the efforts of attorneys Peter Neufeld and Barry Scheck therein just how

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[55] The terms "accuracy" and "precision" are *not* synonyms (see Glossary for an extensive list of technical terms). The former refers to closeness of agreement with agreed-upon reference standards, while the latter has to do with the extent of variability in repeated measurements. One can be quite precise, *and* quite precisely wrong. Precision, in a sense, is a necessary but insufficient prerequisite for the demonstration of "accuracy." Do you hit the "bull's eye" red center of the target all the time, or are your shots scattered all over? Are they tightly clustered lower left (high precision, poor accuracy), or widely scattered lower left (poor precision, poor accuracy). In an analytical laboratory, the "accuracy" of production results cannot be directly determined; it is necessarily inferred from the results of quality control ("QC") data. If the lab does not keep ongoing, meticulous (and expensive) QC records of the performance histories of all instruments and operators, determination of accuracy and precision is not possible.

[56] Peter Neufeld and John Colman, *When Science Takes the Witness Stand*, Scientific American, May 1990.

thoroughly one can indeed argue with science, particularly the discipline of analytical chemistry, which is overwhelmingly "inductive" rather than "deductive." A finding of a given concentration of an analyte[57] in a specimen is an indirect statistical *estimate*, based on a long chain of interim measurements that are themselves estimates, all of which can contribute to uncertainty even as they attempt to add clarification, and any one of which can be sufficiently in error as to weaken or invalidate the final result.

Anyone taking the trouble to avail themselves of the technical literature from NIDA—available free of charge—will find much cautionary language, caveats mostly falling on the deaf ears of War on Drugs zealots:

> Accuracy is the absolutely essential ingredient of laboratory analysis. The public perception of scientific measurements is that they are indisputable. If a laboratory reports the presence of a quantity of drug in a specimen, this ruling is judge to be correct, regardless of protestations to the contrary by the subject.[58]

NIDA scientific officials consequently advise against implementing indiscriminate blanket or random[59] drug testing programs in the absence of evidence of true need:

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[57] The term "analyte" simply means the chemical element or compound of interest in a laboratory analysis.

[58] R.V. Blanke, *Accuracy in Urinalysis*, Urine Testing for Drugs of Abuse, NIDA Research Monograph No. 73, 1986.

[59] In addition to blanket (100%) testing, there is a related, yet methodologically separate issue that should be addressed concerning the use of *random* testing. Axiomatic to inferential statistics is that random sampling assumes the random distribution of true positives in a population. Just as most diseases are unevenly distributed throughout human strata, drug users are by no means

> Urinalysis for detection of drug use should be considered in the context of an overall plan to reduce or prevent the negative impact of drug abuse on an industry or organization. It would be inadvisable, however, to proceed without a careful assessment of the group to be affected by testing . . . The plan should be tailored to the extent of the problem. If no clear indication of significant drug use at a worksite or in an organization is apparent, a program beyond a preventive educational effort may not be warranted.[60]

There is good reason for such circumspection; The suspicionless drug test is part of a larger issue hotly debated in the medical community concerning the clinical and economic utility of mass screening of asymptomatic individuals for low-prevalence conditions. Should all men past the age of 40 have annual PSA screens performed (Prostate-Specific Antigen) for prostate cancer? Should all women submit to annual mammograms or pap smears, irrespective of their ages or overall health status? Should everyone have their serum cholesterol analyzed routinely? Where the prevalence of an adverse condition is low, resources are inescapably wasted on the true negatives, and the probabilities of false positive results rise as the reliability of

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randomly distributed throughout the workforce and the larger society. Drug use occurs predominantly in fairly well-known sociological clusters. The justification offered in defense of random testing is that it is "non-discriminatory" (meaning "democratic") and, as such, allays speculative concerns that managers "out to get" certain workers might otherwise target them for testing. Such an assertion is, however, disingenuous in that all employers retain the right to test employees "for cause" in addition to any programs of blanket or random testing. Moreover, given the uneven distribution of workplace drug users, proper scientific statistical procedure would require stratified sampling plans in which the strata with the lower prevalence rates would be subjected to compensatory higher rates of sampling to elevate the probability of identifying true positives, which would inevitably lead right back to cries of "discrimination." Such methodologically sound practice would never be tolerated by those in the (mostly white-collar professional) low prevalence strata; such groups would clamor for increased sampling in the allegedly high prevalence clusters, theoretical statistical principles notwithstanding.

[60] ibid., Richard L Hawks, Ph.D., *Establishing a Urinalysis Program–Prior Considerations.*

lab results degrades under the weight of the workloads, as laboratory personnel are pressured to cut methodological corners to meet the deliverables. Moreover, consider the following:

> No diagnostic test or screening device is perfect. Errors of omission and commission occur . . . the definition of an accuracy rate can be done in a few different ways, and these are often confused in casual or uninformed communication . . . It is an important fact that predictive values do depend on overall prevalence rates . . . As the prevalence of a condition becomes rare, PPV ["Positive Predictive Value"] drops too, sometimes surprisingly so. For example, a test with sensitivity and specificity each equal to 99% is generally considered quite precise, relative to most diagnostic procedures. Yet for a condition with a not-so-rare prevalence of one per hundred . . . only 50% are truly affected! For a prevalence rate of one per thousand, the PPV is only about .10. These low numbers raise serious ethical and legal questions concerning action to be taken following positive test outcomes.[61]

The foregoing example is an application of Bayesian statistical analysis. The Bayesian formula for dichotomous outcomes is given by:

$$p(A \mid +) = \frac{p(+ \mid A)p(A)}{[\, p(+ \mid A)p(A) + p(+ \mid N)p(N) \,]}$$

Meaning, the probability of being truly "Affected" (a true positive) given a positive test result, or $p(A \mid +)$, is equal to the probability of testing positive given that one is "Affected" $p(+ \mid A)$ times the proportion of "Affecteds" (the "prevalence rate"), or

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[61] Michael O. Finkelstein & Bruce Levin, Statistics for Lawyers, (New York, Springer-Verlag, 1990), pp. 101-103. Another excellent explanation of such principles is to be found in *Probabilistic reasoning in clinical medicine: Problems and opportunities*, in Judgment under uncertainty: Heuristics and Biases, Kahneman, Slovic, and Tversky, ed. (Cambridge UK, Cambridge University Press, 1982), pp. 249-267.

p(+ | A) p(A), divided by the combination of that factor plus p(+ | N) p(N), or the probability of testing positive given that one is a true Negative (a.k.a. an empirical "false positive") times the proportion of true negatives, i.e., [1 - p(A)].

Plug in some numbers. Assume the lab has historically had a false positive rate of 1/1000 (0.001: remember, the lab guy said their operation was 99.9% accurate), and that the proportion of true positives in your work stratum is 1% (0.01). For the sake of simplicity, graciously stipulate that p(+ | A) = 1.0, meaning zero chance of a false negative. Given such assumptions, the predictive probability of being a true positive given a positive test result—that is, p(A | +)—is (.01))[.01 + (.001 x .99)] = 0.909918, or alternatively, the predictive probability of not being a true positive even though the test says "positive" is 1 - 0.909918, or roughly 9%, not 1/10 of 1%. Were you a drug-free employee in such a cohort, your actual risk of incorrectly testing positive would be roughly 90 times what you might naively expect.

A significant concern with respect to all of the foregoing is that neither the prevalence nor the false positive rates are generally known with any degree of certainty (see the Standefer report later in this chapter), particularly the false positive rate, which, in contrast to the prevalence, is operationally specific to each lab and test parameter, and may indeed be unquantifiable in the absence of large and costly datasets of quality control sample analyses. We might ask the lab spokesman: "99.9% accurate? What do you mean by that? That you correctly identify 999 out of 1,000 drug abusers? That you can calculate a spiked[62] sample

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[62] A "spike" is a sample containing a "known" concentration of an analyte derived from an "NIST-traceable" reference source of established and optimal purity

concentration within 1/10 of 1% of the reference value? That you suffer only one false positive for every 999 true positives? That you suffer only one false positive in every 1,000 blind matrix blanks? For each analytical parameter? What, indeed, does '99.9% accurate' mean? Can we have a look at your data?"

SAMHSA/NIDA "certifies" drug testing labs for competence. Curiously, it is none other than the Research Triangle Institute—our previously cited NIDA survey analysis organization (see Chapter 2)—that also holds the contract to administer the NIDA Laboratory Certification Program. A call to the RTI number provided to me by NIDA was answered "National Laboratories Program, may I help you?" The National Laboratory Certification Program Application Form is a slim document of 16 typewritten pages containing mainly yes/no checkoff boxes (e.g., [F.5] "Is the director a full-time employee of the laboratory?"). Section "C," pertaining to quality control, consists solely of six yes/no questions covering two pages of the application form. The accompanying instruction sheet advises that the certification program

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(NIST is the National Institute of Standards and Technology, official source of all U.S. measurement reference standards). A "matrix blank" is an actual sample specimen "known" to not contain any target analytes. Such quality control samples should be run through the lab production process "blind," i.e., posing as a normal client specimens. Blind testing is the preferred method of quality control assessment, simple in principle but difficult to administer in practice, as lab managers and technicians are usually adept at sniffing out inadequately concealed blinds, which subsequently receive special scrutiny. This is particularly true at certification or contract award time; staffs are typically put on "red alert" when Performance Evaluation samples are certain to arrive in advance of license approvals or contract competitions. Such costly vigilance may be difficult to maintain once the license is on the wall and the contracts signed and filed away.

consists of the application form, three rounds of "Performance Test" (PT) sample evaluations, two on site inspections, and fees totaling $17,300.00.

Performance requirements on the PT samples appear to be surprisingly lenient:

> Acceptable performance for a PT shipment is no false positive result and the identification of 90% of all required drugs and/or metabolites that are used to represent a drug or drug class in the samples. In addition, the quantitative results determined for PT samples must be within "± 20% of the mean calculated for the reference laboratories for 80% of all drug challenges, and within "± 50% of the calculated mean for all samples.

No false positives, sounds reassuring: after all such is our overriding civil liberties concern, false accusation. But look closely; the "90%" identification requirement provides the applicant with a safety valve allowing for up to 10% "false negatives," so when in doubt on the PT samples, simply declare the sample to be "negative." Given that the NIDA specified spike concentrations of the PT matrices are typically well above backgrounds (e.g., 180 ng/mL. for cocaine metabolite where, for example, its Liquid Chromatography MDC[63] (Minimum Detectable

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[63] MDC Note: Laboratory technologies are incapable of detecting analyte concentrations all the way down to "zero" for a number of reasons, including chemical interferences in the various constituents of the sample matrices and the "noise" inherent in any electronic system (think about the "signal-to-noise ratio" specifications accompanying your stereo system). The choice of "cut-off" levels that classify results as either "positive or "negative" on the basis of their quantification above or below administratively pre-determined concentration limits is a principal factor in relative rates of false positives and negatives. Low cut-offs risk excessive false positives, whereas high cut-offs inevitably lead to a higher false negative rate. The choices must be made with consideration for the consequences of being wrong either way, balanced against the benefits of being right. Assay "sensitivity" refers to the probability that a true positive can be identified; "specificity" denotes the probability that a true negative will be so determined. These two analytical attributes are mutually inverse, and simultaneous optimization of drug test sensitivity and specificity (or, equivalently, at once minimizing the possibility of

Concentration) in biological fluids is on the order of 20 to 50 ng/mL.), and given that these PT samples are unlikely to be truly "blind," (if even shipped as such) only the most glaringly incompetent of laboratories are likely to fail this sort of licensing process. And, according to the instructions accompanying the application, facilities so maladroit as to "not perform acceptably in the proficiency testing or any other stage of the certification process . . . may request reinstatement into the certification program." The only condition for reinstatement is "the subsequent expense of repeat certification activities."

So: perhaps "99.9% accurate" may actually mean something like "we can analyze 90% of spiked samples within ± 20% of a "known" value 80% of the time, and within ± 50% the remaining 20% of the time." If we know ahead of time what to expect and when to expect it.

Does "± 20%" imply laboratory ineptitude? Not necessarily. Consider the "power" formula below, which researchers use to determine sample size ("n") required to discriminate between an expected value (such as a "cut-off") and an experimental result:

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false positives and false negatives) is not economically feasible in inexpensive mass production mode. Something has to give. The same principle applies in criminal jurisprudence, wherein "sensitivity" (the allegations) must be supported beyond a reasonable doubt by "specificity," (the particular, logically undeniable proofs). Allegations (screens) are cheap; proof (confirmation) is expensive (and made prohibitively more so in the absence of probable cause).

$$n = \frac{[(Z_a - (-Z_b))s]^2}{(\mu_1 - \mu_0)^2}$$

The denominator ($\mu_1 - \mu_0$) represents the difference of the two means. The "Z" values refer to the bell curve standard score significance levels we can choose for false positives (a, or "alpha") and false negatives (b, "beta"), respectively. The "sigma" (s) refers to the "standard deviation," i.e., the expected variability based on prior measurements. Once again, plug in some numbers. Assume a measurement cutoff (μ_0) of 100 ng/mL., with a sigma of 4%, or 4 ng/mL. Fix "n" at 1, the alpha level at 3.72 (meaning far less than a 0.001 chance of a false positive), and beta at 1.28 (for a 10% chance of a false negative). Set μ_0 at 100 (the cutoff value), and solve for μ_1. You get $\mu_1 = 120$, a 20% difference, the best you could be expected to do given a single run at specified probability and empirical process variability levels. And, in the trenches, a lab able to keep its process standard deviations at or below 5% under a heavy workload is doing very well indeed.[64] In this example we set n at "1"

[64] *Why*? Recall our earlier observation: A finding of a given concentration of an analyte in a specimen is an indirect statistical estimate, based on a long chain of interim measurements that are themselves estimates, all of which can contribute to uncertainty even as they attempt to add clarification, and any one of which can be sufficiently in error as to weaken or invalidate the final result.

In a multi-step process involving many interim measurements, each with a variability component, the overall uncertainty is a type of sum of the individual fluctuations. In formal stat-speak, the total process variance is the sum of the individual variances. You then take the square root of *that* to come up with the collective process standard deviation. Another way of stating this is that error terms are additive, they cannot be assumed to just cancel each other out, because of a principle known as the "random walk" phenomenon in which extended runs high or

because production sample analysis is generally a one-run estimate of a "true" concentration. Were we to want finer discrimination, we would have to analyze a sample multiple times (look at the mechanics of the formula). This is problematic, in that samples are typically consumed in analysis. We would have to split samples up into multiple "aliquots" for re-runs, and commercial labs do not routinely go to such effort and expense. The client gets a one-shot assessment. And, with the proposed increases in sample throughput, the quality of those one-shot analyses will be hard to maintain or improve.

The impact of cumulative variance/error propagation is seen in a monograph entitled *GC/MS Quantitation of Benzoylecgonine Following Liquid-Liquid Extraction of Urine.* The salient paragraph follows:

> The precision of the method was evaluated by the analysis of quality control samples independently spiked at 150 ng/mL. Within-run and between-run precision were determined by analyzing the control material seven times. Within-run the mean concentration

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low are shown to be more likely than would be intuitive. I recall the phrase "errors don't cancel out, they just get diluted."

Another point: assume that a process contains 100 independent steps, each of which is performed "correctly" 99.9% of the time. What is the overall probability of the process executing without a "failure"? The average? (99.9%?) Greater than that? No. It would be .999 raised to the 100th power, or 90.5%, meaning that almost once every ten runs at least one step will "fail." It gets even worse when the steps are not independent, and one must take into account the consequence of any single process mishap. Consider now for a moment that a typical Gas Chromatography/ Mass Spectrometry (GC/MS) test used to confirm drug screen positives has 30 procedural steps, 27 of which involve taking measurements. The point? Accuracy and precision do not come easily or cheaply. To those who make vague and broad assertions about their operational inerrancy, we must reply "Show us the data!" (operational quality control data, that is.)

> found was, BE at 142 ng/mL.(CV = 3.0%). Between-run the mean concentration was, BE at 145 ng/mL. (CV = 2.7%).[65]

The "CV," recall, is the coefficient of variation, alternatively called the percent standard deviation. A bit of statistical math: (0.03)(142) = 4.26 ng/mL. and (0.027)(145) = 3.92 ng/mL., the "sigmas" (expected variabilities based on the experimental distributions) for the respective experimental results. Recall that the "spike" (the reference standard concentration) was 150—not "151" or "149" (the "significant figures" issue). Are "142" and "145" statistically equivalent to 150. i.e. close enough to affirm the utility of the method? Statistical significance t-test and p-values for the foregoing work out to $t = -4.97$ ($p < 0.01$) and $t = -3.37$ ($p < 0.01$) respectively at 6 degrees of freedom (n-1). Equivalently, the 99% confidence intervals for the experimental means are 142 ± 6 and 145 ± 5.5 respectively. In formal statistical terms, these results are "significantly" off the mark, low. This researcher concluded the results to be close enough, however, stating that "[T]he present guidelines of the National Institute on Drug Abuse call for a cutoff concentration of BE of 150 ng/mL. for GC/MS confirmation in urine. The procedure was found to be an accurate, reliable means for the identification and quantitation of BE at these levels."[66]

Perhaps so; but a couple of cautionary observations are in order. First, putting aside any technical quibbles over t-test or confidence-interval statistical decision

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[65] John Gerlitz, MS, *GC/MS Quantitation of Benzoylecgonine Following Liquid-Liquid Extraction of Urine,* Journal of Forensic Sciences, Vol. 38, Sept. 1993, pp. 1210-13

[66] ibid., p. 1213.

criteria, 5.3% (142/150) and 3.3% (145/150) differentials from a reference value do not qualify as—recall Justice Scalia—"99.94% accurate." Second, this was a controlled methods development experiment in which the researcher *knew* what he was looking for (150 ng/mL.). These results are well within the generous NIDA accreditation PE latitude, so in that sense the method is "accurate and reliable," but it is orders of magnitude more imprecise than would be assumed by a clinically untutored Supreme Court Justice. Moreover, this is a GC/MS (Gas Chromatography / Mass Spectrometry) quantitation experiment, using what is ostensibly the "forensic" gold standard of lab technology, the one used to confirm employment screen positives. We must ask: what kind of variability will be the norm in "blind" mass production commercial analytical settings? Are there any legitimate false positive/negative error rate concerns?

The Standefer Performance Evaluation[67] (1990) study cites fairly recent historical false positive and false negative PE rates for specimens containing metabolite concentrations "spiked" near the administrative cut-off levels for amphetamine, benzoylecgonine, morphine, codeine, THC, and phencyclidine (PCP):

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[67] cited in *Forensic Urine Drug Testing,* March, 1991, Robert B. Swotinsky, Ed., The Medical Review Officer's Guide to Drug Testing, (New York, Van Nostrand Reinhold, 1992), pp. 7-8.

Drug class	False negative rate (%)	False positive rate (%)
Amphetamine	4.9	1.6
Benzoylecgonine	3.3	2.9
Morphine	2.3	3.3
Codeine	0.7	0.6
THC	10.5	0.7
Phencyclidine	8.6	0.4

These data are by now a bit aged, and what counts—most importantly with respect to the interests of those tested—are the tabulations for the current quarter, but can we safely conclude that such error rates have fallen off the radar by now? That all labs are by now consistently "99.94% accurate"? Can we see your data?

Competence in the commercial lab

As alluded to above, critical to accurate laboratory specimen analysis is a solid understanding of the statistical nature of such work (review the foregoing)—most importantly the degree to which probability estimates ("*is this result truly a 'positive'?*") are impacted by distributional abnormalities, particularly in proximity to analytical cut-off limits and "MDCs" (Minimum Detectable Concentrations). Unfortunately, most chemists and lab technicians are exposed to only a cursory examination of applied mathematical statistics—the ugly and disdained stepchild of

quantitative disciplines. Standard academic texts on statistics rarely venture deeply—if at all—into issues of distributional departures from the "normal" (i.e. "Gaussian," depicted by the theoretical Bell Curve). Such is unfortunate; real-world operational requirements require a good bit more acuity with respect to the statistical factors that shape and validate (or negate) lab results. As pointed out, for example, by Dr. Lloyd A.Currie of the National Bureau of Standards (now NIST, the National Institute of Standards and Technology), an eminence in the field of quantitative radiochemical assessment:

> Once we leave the domain of simple detection of signals, and face the question of analyte or radioactivity concentration detection, we encounter numerous added problems or difficulties with assumption validity. That is, assumptions concerning the calibration function or functions—i.e., the full analytic model—and the "propagation" of errors (and distributional characteristics) become crucial.[68]

Now, two conventional statistical "significance thresholds" are those of the "95% or 99% confidence levels" wherein it is assumed that 95% or 99% of the variation in a set of measurements is confined within ± two or ± three "standard deviations" (a.k.a. "2-sigma" or "3-sigma") of the mean, or average value (think of the standard deviation as more or less "the average variability around the average"). A measurement found outside such a ± 2- or 3-sigma ranges is frequently declared to be a "significant" difference from the overall population of values, with only approximately a "5% chance" or "1 % chance" of being wrong, respectively. But, real-

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[68] Lloyd A. Currie, *Lower Limit of Detection . . .* , National Bureau of Standards, NUREG/CR-4007, 1984, pp. 18-19.

world measurement datasets only approximate to a greater or lesser degree the theoretical Bell Curve distribution.

"Chebychev's Theorem," on the other hand, provides us with a lower probability bound applicable when distributional characteristics are unknown or uncertain. Pafnutii L. Chebychev (1821-94), a Russian mathematician, proved that, for any set of measurements capable of yielding a mean and standard deviation, the proportion of data within "K" sigma is always at least $(1 - 1/K^2)$ irrespective of the "shape" of the distribution. So, at 2-sigma, the within-limits distributional proportion could be as low as $1 - 1/2^2$ or 75%, and would most often be somewhere between 75% and the 95% of the pure Gaussian distribution. Similarly, at 3-sigma the inclusive range would be from 89% to better than 99%. So, for example, when we make a claim of having only a 5% or 1% "chance of error," we assume a lot that might not stand up to proper methodological scrutiny. And, if one's job and reputation are on the line, scrutiny is highly recommended.

Statistical "tests for normality" exist, but are rarely taught to anyone except those studying advanced statistics. Most of those analyzing bioassay specimens simply believe their results are accurate if they fall within pre-set (though often unrealistic) standard statistical boundaries. The following review of a random sample of college and professional analytical chemistry books reveals just why. To the extent that the topic of "statistics" is included at all, it is usually brief and basic, with little to nothing regarding probabilistic/distributional caution.

University-level analytical chemistry texts:

- Modern Methods of Chemical Analysis, (New York, Wiley & Sons, 1968), Pecsok, R.L. & Shields, L.D. Nothing on laboratory statistics.

- Fundamentals of Analytical Chemistry, (New York, Holt, Rinehart, & Winston, 1962), Skoog & West. Chapter 3, pp. 33-68, basic univariate Gaussian statistics. No mention of non-normal distribution probability considerations.

- Instrumental Analysis, (Newton, MA, Allyn & Bacon, 1986), Christian, G.D. & O'Reilly, J.E. Eds., Chapter 19.6 pp. 632-35. Four pages on "Statistical Considerations in Radiochemical Analysis." No mention of non-normal distribution probability considerations.

- Instrumental Methods of Analysis, 6th Edition, (Belmont, CA, Litton Educational Publishers, 1981), Willard, Merritt, Dean, & Settle. Chapter 29.7, pp. 861-67, "Evaluation of Results." Seven pages of basic statistics & lab "precision." No mention of non-normal distribution probability considerations.

- Instrumental Methods of Analysis, 7th Edition, (Belmont, CA, Wadsworth Publishing Co., 1988), Willard, Merritt, Dean, & Settle. pp. 29-37. Eight pages of basic statistics & lab "precision." No mention of non-normal distribution probability considerations.

- Instrumental Methods of Chemical Analysis, (New York, McGraw-Hill, 1985), Ewing, G.W. Chapter 26, pp. 480-487. Eight pages of "precision and accuracy" issues and "error propagation." Nothing on basic statistics, and no mention of non-normal distribution probability considerations.

- Chemical Intrumentation: a systematic approach, (New York, Wiley & Sons, 1989), Strobel, W.R. Chapter 10, "Statistical Control of Measurement Quality," pp 343-363. Basic univariate and bivariate Gaussian statistics, with discussion of precision, accuracy, and error propagation issues. No mention of non-normal distribution probability considerations.

- Advanced Instrumental Methods of Chemical Analysis, (New York, Ellis Horwood, 1993), Churacek, J. Ed. Chapter 16, pp. 406-415, "Chemometrics in the Instrumental Laboratory." Short discussion of measurement error propagation and univariate Gaussian distribution. No mention of non-normal distribution probability considerations.

- Introduction to Mass Spectrometry, (Philadelphia, PA, Lippincott-Raven Publishers, 1997), Watson J. T. Chapter 18, "Sources of Error and Interference," pp 414-19, focused on contamination and matrix interference issues. Section 7, pp 449-50, "Precision and Accuracy," one and one-half pages on replicability of results (e.g. "RSD" or Relative Standard Deviation). Nothing else on laboratory

statistics, including no mention of non-normal distribution probability considerations.

- Advanced Analytical Chemistry, (New York, McGraw-Hill, 1958), Meites, L., Thomas, H.C., & Baumann, R.P. Mention of Gaussian distribution on pp 354-55. No mention of non-normal distribution probability considerations.

Principles of Instrumental Analysis, 4th Edition, (Ft. Worth, TX, Saunders College Publishing, 1992), Skoog & Leary. Appendix 1, pp, A1-A19. "Evaluation of Analytical Data." Basic Gaussian statistics. No mention of non-normal distribution probability considerations.

Analytical chemistry math/statistics texts:

- Use of Statistics to Develop and Evaluate Analytical Methods, (Arlington, VA, Association of Official Analytical Chemists, 1985). Basic applied Gaussian statistics. No mention of non-normal distribution probability considerations.

- Chemometrics: Applications of Mathematics and Statistics to Laboratory Systems, (New York, Ellis Horwood, 1990), Brereton, R.G. Basic applied Gaussian statistics. No mention of non-normal distribution probability considerations.

- Practical Guide to Chemometrics, (New York, Marcel Dekker, Inc., 1992), Haswell, S.J. Chapter 2, pp. 5-15, "Statistical Evaluation of Data." Basic applied Gaussian statistics. No mention of non-normal distribution probability considerations.

- Statistics for Analytical Chemistry, (New York, Ellis Horwood/Wiley & Sons, 1984), Miller, J.C. & Miller J.N., Basic applied Gaussian statistics. Three paragraphs (pp. 76-78, Section 3.13) on "Testing for Normality."

- Statistics for Analytical Chemists, (London, UK, Chapman & Hall, 1983), Caulcutt R. & Boddy, R. Basic applied Gaussian statistics, with three paragraphs addressing "Other Distributions" (Section 2.5, pp 14-16), providing a brief discussion of the effect of distributional skew on probability estimation.

- Use of Recovery Factors in Trace Analysis, (Cambridge, UK, The Royal Society of Chemistry Information Service, 1996), Parkany, M. One paragraph on "Propagation of Error Considerations," page 3.

Analytical chemistry reference/continuing education texts:

- Samples and Standards: Analytical Chemistry by Open Learning, (New York, Wiley & Sons, 1987), Woodget. Ten pages of basic applied Gaussian statistics (pp. 41-50). No mention of non-normal distribution probability considerations.
- The Laboratory Handbook of Materials, Equipment, and Techniques, (Englewood Cliffs, NJ, Prentice-Hall, 1992), Coyne, G.S. Some references concerning accuracy, precision, and "significant figures," but otherwise nothing at all regarding laboratory math/statistics.
- Chemical Technicians' Ready Reference Handbook, 2nd Edition, (New York, McGraw-Hill, 1981), Shugar, G.J., Shugar, R.A., Bauman, L., & Bauman, R.S. No references to laboratory math/statistics.

Only one text in the foregoing literature review sample—Statistics for Analytical Chemists—had even the barest mention of distribution asymmetry and its potential impact on lab results. Most laboratory personnel are simply unaware that the validity of statistical inference is highly contingent upon distributional assumptions that may or may not be tenable in day-to-day operations.

OJT concerns

Regrettably, statistical naiveté finds its way into both the peer-reviewed literature and the continuing education texts used for on-the-job training in the lab. A training manual from my own lab tenure—Radiochemical Methods[69]—illustrates the phenomenon. In Section 5.1.2 ("Radioimmunoassay") a methods development monograph is presented from the journal Analyst[70] entitled *Direct*

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[69] W. Geary, Radiochemical Methods, (New York, Wiley & Sons, 1986).

[70] Mason, Law, Pocock, & Moffat, *Direct Radioimmunoassay for the Detection of Barbiturates in Blood and Urine*, Analyst, June 1982, Vol.107, pp. 629-33

Radioimmunoassay for the Detection of Barbiturates in Blood and Urine. Among the statistical curiosities in this paper is the following:

> The distribution of background levels of cross-reactivity in 50 samples of urine from normal subjects who were not receiving barbiturate medication was positively skewed with a mean and standard deviation of 15 ± 28 ng/mL. The positive/negative cut-off for urine samples was set at 100 ng/mL., thus ensuring a >99% probability of obtaining a true positive result . . .

What this investigator obviously calculated was "mean + roughly 3-sigma," or "15 + (28)(3) = 99, round off at 100." Now, since 99.7% of data in an exactly normal distribution are within ± 3 standard deviations around the mean, one would be justified in concluding that a result greater than 100 ng/mL. was indeed a "positive" at better than "99% probability."

What is wrong with this picture? Consider that these are *ratio-level* data—meaning one cannot have less than zero nanograms/milliliter of an analyte in a specimen. For the distribution of these 50 sample assays to be approximately "normal" with a mean of 15, the standard deviation could not be greater than approximately 5, as mean – (3)(5) = 0. With a sigma of 28—nearly twice the magnitude of the mean—the data are highly skewed (the author even acknowledges this), making his blithe assumption of ">99% probability" mathematically unsustainable. By Chebychev rule—in this instance $1 - 1/3^2$ or 0.89—the worst-case confidence level would be more on the order of 89%, roughly a one-in-ten chance of a >100 ng/mL. false positive.

Since the raw data (the 50 "matrix blank" sample run results) are not provided in the monograph, we have no way to assess just what the data distribution profile might be—besides obviously skewed, with some rather high values requisite to effect a sigma so large relative to such a small mean. But, assume there were no blank results >100 ng/mL.(for were there just one, the false positive rate estimate would then seem to necessarily be minimally 1 out of 50, or 2%, irrespective of any conventional statistical parameter estimates). Another little known statistical principle comes into play that gives a confidence estimate close to that of the minimalist Chebychev: the "Rule of 4.6/n."

As set forth in *If Nothing Goes Wrong, Is Everything All Right? Interpreting Zero Numerators,*[71] the confidence interval estimate appropriate for circumstances where "positives" are rare—and, in seemingly problematic fashion, fail to turn up during an investigation—is given by the simple formula [0 <= p <= -ln(C)/n], where p = the true proportion of positives, C = the acceptance level for the probability of a false positive, and ln( ) is the natural, or "naperian" logarithm. So, assume a "99% confidence level," meaning C= 0.01, a 1% chance or less of a false positive. Do the math: -ln(0.01)/50 = 9.2%, meaning that we can be 99% confident that the possible proportion of positives is from zero to 9.2%, given that we sampled 50, found none, and are bereft of defensible parametric distribution indices that augur anything better. Note how close this is to the Chebychev boundary in the foregoing example. Both Chebychev and the "-ln(C)/n" principle provide us with worst-case bounds for

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[71] Hanley & Lippman-Hand, Ph.D.s, *If Nothing Goes Wrong, is Everything All Right? Interpreting Zero Numerators,* JAMA, Vol. 249, No 13, pp. 1743-45.

probabilistic estimation under conditions of uncertainty—neither of which appeared on the empirical radar of the experimenter just cited, one—like so many—content with a simplistic notion of "mean + 3-sigma." for setting cut-off limits.

The point of all this stochastic techno-babble? Several, actually. First, when we observe less than 100 events and claim to have estimated some "percentage," we are extrapolating. (If I go to bat 8 times and get 3 hits, that my "batting average" is at that moment ".375" is mere long-division arithmetical artifact. We will have to await my 1,000th trip to the plate to see whether the "7" and the "5"—or the "3," for that matter—are still around) Second, given that the entire business of inferential statistics concerns extrapolating wisely from ostensibly representative random samples to their parent populations, a good deal of circumspection is in order should certain fundamental distributional assumptions not be met. Finally, we are not dealing with mere academic statistical nit-picking here; employees' jobs, careers, and reputations are at stake.

Moving along: it get worse. Radiochemical Methods also contains an exercise wherein students are to construct a curvilinear "calibration function" for computing RIA (radioimmunoassay) production specimen analysis of insulin—on the basis of four data points from "reference standard" analyses. Basically, the student plots the four results, connects the dots with a smooth curve, and then subsequently "computes" the "unknown" (production) sample results by visual reference: up from the "x" axis (the radiation counts/minute) to the curve, then right, horizontally over to the "y" axis (for the estimated insulin concentration). Nowhere in this exercise is

there any discussion of "error bounds" i.e., the likely variation for each of the four reference data points and what such implies for "calibration function" indeterminacy. Nor—in related fashion—is there any apparent awareness that no competent statistician would ever agree to derivation of a "higher-order" (curvilinear) calibration function on the basis of just four internal tracer results. Forty perhaps (per concentration level, across the full analytical range), but not four.

One concern we ought have with respect to the foregoing: Economic pressures are putting more and more of the in-the-trenches lab work in the hands of technicians of perhaps even lesser training and competence. That which used to be the domain of chemists with at least a 4-year degree (with questionable statistical acumen) is now expected of community college graduates with AA degrees (and likely even more deficient in statistical skills).

Moreover, the gradual shift toward expensive, high-tech automated lab equipment and away from traditional "bench chemistry"—which turns many lab "analysts" into mere mass-production machine operators—is not without problems, either: accuracy and precision concerns merely shift to the equipment manufacturers and those who maintain the instruments—not to mention those who interpret and sign off on the results of such automated processes, many of them also woefully undereducated with respect to the statistical underpinnings of their findings. Many of them eager to just believe that the technologies and procedures are inerrant.

But, it cannot just be assumed that the numbers coming out of any analytical process, whatever its apparent sophistication, are acceptably "exact" just because the instruments and processes are assertedly error-proof.

May we have a look at your data?

Conventional Drug Testing Methodology

The current NIDA protocol for drug urinalysis specifies the use of the Enzyme-Multiplied Immunoassay (EMIT®) test to screen samples, followed by the sophisticated GC/MS technology for confirmation of screen "positives." GC/MS, or Gas Chromatography/Mass Spectrometry is the most accurate, precise, and specific technology generally available to the clinical chemist, the only analytical method universally stipulated to conform to the federal Frye Standard for admissibility as forensic evidence. It is expensive, requiring sophisticated equipment and advanced training and skill. Immunological drug abuse screens such as the EMIT on the other hand, are inexpensive, but they are markedly non-specific, meaning they yield a relatively high proportion of false positives owing to their sensitivity to "cross-reactive" compounds with molecular structures similar to those of the target analytes. EMIT screens are known to return false positives for literally hundreds of legal substances.[72] It is the GC/MS method that "disconfirms" or weeds out such errors.

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[72] see Barbara A. Smith & Jean C. Joseph, *EMIT Assays for Drugs of Abuse*, in Analytical Aspects of Drug Testing, Dale G. Deutsch, Ed., (New York, John Wiley & Sons, 1989), pp. 35 - 58. The EMIT® is actually a "panel" or battery of immunoassay screens for detecting amphetamine, cocaine, THC (marijuana),

In light of the foregoing, we must now have a look at a serious ethical issue arising from mass production indiscriminate drug testing. Quoting once more from the 1994 National Academy of Sciences findings:

> Preemployment drug testing may have serious consequences for job applicants. Applicants, unlike most employees, often do not enjoy safeguards commensurate with these consequences. A particular danger of unfairness arises because screening test data are reported to companies despite the known possibility of false positive classification errors. Recommendation: No positive test result should be reported for a job applicant until a positive screening test has been confirmed by GC/MS technology.[73]

The importance of this last point cannot be overstated, especially since there are increasing economic pressures to do away with GC/MS confirmations of pre-employment tests. It is argued that a "medical" a.k.a. "clinical" standard will suffice (i.e., unconfirmed by GC/MS). The real reason for this attitude is that employers want to pay as little as possible for drug testing, and lab owners are hard-pressed to finance sufficient equipment and to recruit and retain enough GC/MS-competent chemists to perform the volume of confirmations required of a mass screening workload. Consider a few rough estimates: assume quarterly screening of merely 10% of the U.S. civilian work force of 120 million; 48 million screens would be

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barbiturate, opiate, and Phencyclidine (PCP) metabolites, which are biochemical derivatives of compounds in the originally ingested drugs. The monograph lists 211 false-positive reactive substances for the EMIT amphetamine assay alone! (e.g., Alka-Seltzer Plus, Contac, Sudafed, Dimetapp, Tavist-D, Robitussin NR, Actifed and so forth). Think of a clinical screen as radar picking up an unscheduled flight, highly sensitive, but inherently non-specific: *Well, it must be a plane, coming this way pretty fast; must be a jet; beyond that can't tell you much. Don't know whose it is, how many engines, what color, who's on board, where it's precisely headed . . .*

[73] Normand et al, op cit., pg. 9.

required annually. Assume further a prevalence of "true positives," i.e., those with sufficient metabolite concentrations in their samples to be at all detectable, to be roughly the 8.3% that NIDA has claimed, or 10 million in the work force, implying roughly one million among those sampled each quarter. If the screens can pick up 90% of the true positives while yielding a false positive rate of perhaps 2%, (a conservative estimate) the resulting 3.6 million annually detected true positives detected plus the 880,000 false positives (2% of the 44 million yearly true negatives) implies a need for nearly 4.48 million GC/MS tests per year, or equivalently, more than 245 GC/MS runs per NIDA-certified lab per day, seven days a week, 365 days per year. The equipment and trained labor capacity to perform anywhere near such a quantity of GC/MS solely for drug screening confirmation do not exist (ignoring for the moment the even greater issue of the resources required to manage such an enormous volume of screens). The laboratory infrastructure must also deal with the remaining analytical needs of government, industry, and health care. The volume of environmental testing required under Superfund and related EPA laws and regulations is staggering. USDA, FDA, and OSHA must continually test the food supply, pharmaceuticals, and all manner of materials for a host of health and safety criteria. Hospitals and physicians require timely and accurate clinical lab results for effective treatment of the sick and injured (Think about that the next time you are ill and your health care provider's lab vendor is operating at chronic overload owing to their employment drug screening "easy-money" infatuation). The criminal justice system has no shortage of forensic-quality analytical work to be done on an ongoing basis. Such capacity limitations alone call into serious question the general wisdom

of mass drug testing, and raise serious ethical concerns with respect to non-confirmed "clinical standard" false positive rates given the cost-minimization imperatives felt by employers and commercial laboratories alike.

Is any of this truly warranted? The NAS report asks the same question:

> The use of illegal drugs in recent years is thought to pose problems so severe as to justify a 'war on drugs.' The current war on drugs overlooks, however, the abuse of alcohol and tobacco, which cause more deaths in the United States than all illegal drugs combined (Newcomb, 1992). Whereas illegal drugs are estimated to be responsible for approximately 30,000 premature deaths in the United States per year (Reuter, 1992), tobacco is responsible for nearly 400,000 premature deaths per year and alcohol accounts for nearly 100,000 fatalities per year (Julien, 1992).[74]

In our zeal to combat a relatively minor fraction of the overall U.S. substance abuse problem, we blithely ignore the counsel of esteemed institutions like NAS, as well as the expertise of NIDA scientists. We propose to put millions of job applicants at undue risk of false accusation in the name of a War on Drugs and in the service of commercial laboratories under continuing pressure to cut methodological corners in pursuit of profit. Dr. Richard Hawks of NIDA, further commenting on the special situation of testing of preemployment applicants:

> Most of the urine samples being analyzed in industry today are associated with preemployment applications. While many of the rights usually accorded an applicant are not necessarily those of an

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[74] Normand et al, op cit., p. 15. The point was driven home again in Congressional testimony on May 1, 1995 by then-FDA Commissioner Dr. David Kessler: "Smoking kills more people each year in the United States than AIDS, car accidents, alcohol, homicides, illegal drugs, suicides and fires combined. And the real tragedy is that these deaths from smoking are preventable."

> employee, the same rights of privacy and accuracy of analysis should be accorded these individuals.[75]

Contrast such a sensible and fair-minded observation—one entirely consonant with the NAS report recommendation—with those of Psychemedics Corporation executives and associates:

> In general, private sector employers tend to the opinion that it is excessive to apply forensic-standard testing to job applicants, since job-seekers are frequently rejected on the basis of very subjective criteria such as unsatisfactory appearance or demeanor. This opinion is shared by a number of analysts of pending drug testing legislation for the private sector. In place of forensic standards, medical standards have been effectively applied in pre-employment situations.[76]

No competent Human Resources manager would share such a view. Prudent hiring practices include fastidious documentation of objective rejection criteria. Psychiatrist Dr. Robert L. DuPont, however, former Director of NIDA, Presidential "Drug Czar," and now a "consultant" to Psychemedics, has an even more curious take on the subject:

> In some settings hair testing can be done without GC/MS confirmation . . . Preemployment is another setting where confirmation may not be needed. The best confirmation of all is not GC/MS, but admission of drug use by the person tested.[77]

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[75] Richard L. Hawks, Ph.D., *Establishing a Urine Testing Program: Prior Considerations, in Urine Testing for Drugs of Abuse*, (Rockville, MD, NIDA Research Monograph Series, Monograph #73, 1986)

[76] Werner A. Baumgartner & Virginia A. Hill, *Hair Analysis for Drugs of Abuse: Some Forensic and Policy Issues*, NIDA 1990 Conference Proceedings.

[77] Robert L. DuPont, M.D., *Hair Testing for Abused Drugs: A Practical Guide*, Institute for Behavior and Health, Inc., Rockville, MD., 1990.

On the contrary, the term "confirmation" in this context properly means independent verification, *not* affirmation under duress, given the latter's long and ignoble history.

Dr. DuPont was once awarded a Department of Energy grant for "a study described as 'an attempt to demonstrate that opponents of nuclear power are mentally ill.' DuPont [says] that he will study unhealthy fear, a phobia that is a denial of reality."[78] Psychiatrists are frequently big on Denial. Dr. DuPont seems to imply that since "the cardinal symptom of drug abuse is denial,"[79] if you use illegal drugs and claim to do so without adverse consequences, you are by definition in Denial; your very dissent proves you to be an addict. And, before we can help you (given that you manage so well to not evince any overt symptoms), we must identify you through inexpensive mass drug screening.

You might as well just confess on the basis of the "clinical" screen result; after all, where there's smoke, there's usually fire, correct?

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[78] K.S. Schrader-Frechette, Risk and Rationality: Philosophical Foundations for Populist Reforms, (Berkeley, CA. University of California Press, 1991). p. 14.

[79] DuPont, op cit. In 1995 the U.S. Supreme Court handed down a major drug testing decision in the case of *Vernonia School District 47-J v. Acton et ux.*, (Docket 94-590, suspicionless drug testing of Vernonia, Oregon high school athletes), ruling that the institution's interest in combating drug abuse outweighed any right to privacy on the part of student-athletes. The "scientific expert" for the school district, noted in the ACLU's Amicus Brief, is none other than Dr. Robert L. DuPont. Dr. DuPont first came to my attention when his paper cited above came in a two-inch thick bound volume of "scientific" papers I received from Psychemedics Corporation. In his paper Dr. DuPont waxes rhapsodic with respect to the virtues of the RIAH® drug test, and enthusiastically supports its expanded utilization. Is this man a disinterested and principled scientist or a partisan advocate of mass drug testing with a financial stake in its spread to all sectors of society?

Analytical chemistry *can* indeed be performed to a very high degree of accuracy and precision. But to assert that it can be done so on the cheap in mass production mode without putting innocent people at unacceptable risk is open to serious question. On January 16, 1991, Dr. Donald Cathlin, Director of the Olympic Analytical Laboratory on the UCLA campus was interviewed on National Public Radio's "Morning Edition" by reporter Ina Jaffe (10:21 EST). She began by narrating that the lab was "among the most sophisticated drug-testing labs in the country, if not the world. Begun in 1982 to prepare for the Olympics in Los Angeles, the lab still performs more than 15,000 tests per year for the United States Olympic Committee, the National Football League, the National Collegiate Athletic Association, and the Defense Department." Dr. Cathlin, in describing the analytical process at his facility, reported that GC/MS was used as a preliminary screening tool! Samples found to be GC/MS-positives were subjected to "another three or four days of additional chemist-chemical work . . . to make a final determination . . . "

The reason for such tender care should be obvious: no one wants to risk falsely accusing a $5 million per year ballplayer on the basis of a $20 EMIT screen. But Joe & Jane Lunchbucket et al are expected to submit en masse to a largely symbolic, wasteful process that poses serious question as to its propriety, efficacy, and potential to put drug-free individuals at risk of being falsely accused of criminal activity. Beyond the purely ethical, there are compelling scientific reasons for adhering to the "probable cause" selection standard in chemical testing for illicit drug use. Hard-core users will not be deterred by such non-cause measures (Charles Manson certainly was not), and the overwhelming majority that are in fact drug-

free provide no information of value by being forced to submit; the costs of processing their samples are both figuratively and literally poured down the drain. Indeed, most of the truly "hard-core" drug users are not even in the work force, and those that are typically dwell in the transient semi- and unskilled employment sectors, not in the technical and professional domains so aggressively targeted by commercial drug testing marketers. The truly high prevalence strata were long ago identified and subjected to testing.

The campaign to extend non-cause testing to all employment sectors has everything to do with political symbolism and laboratory profitability, and nothing whatever to do with effective social policy. Such token measures are not, however, without significant costs; a 1991 GAO investigation of federal employment non-cause testing programs revealed a confirmed positive rate of 0.5% (that's a mere 0.005), and pegged the administrative cost at $77,000 per confirmed positive. Conservatively assigned cut-off limits cannot but indicate that the analyses are in fact being performed at "probable-cause" sensitivity levels anyway (with the hope that no one will notice, and be cowed into compliance), resulting in a significant proportion of "false negatives" among casual drug users tested.[80]

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[80] How are we otherwise to account for the large gap between the purported unacceptably high overall work force prevalence rates and low confirmed positive findings such as those detailed in the GAO findings? Opting for the probable-cause strategy yields better science, in that the prevalence rate among those tested would by definition be greater than 50% [$p(A) > 0.5$], thus significantly lowering the Bayesian probability of false positive findings while enabling the labs to perform more accurate analyses on a much smaller workload (for which they could charge commensurably more to cover the costs of performing forensic quality analyses), a circumstance which would also diminish the proportion of false negatives, because cut-off levels could be lowered, yielding better sensitivity.

The net result of mass suspicionless drug testing, its ethical poverty aside, is an egregious waste of scientific resources, to the detriment of all who have need of high-caliber analytical laboratory services.[81]

Moreover, the drug metabolite concentration levels in the probable-cause specimens would undoubtedly be significantly higher on average, making true positive determinations far less susceptible to challenge. The rationale for the ethical and legal concept of "probable cause" is not purely "political" and "philosophical." It is implicitly rooted in sound science.

[81] *Food for thought:* You are an administrator perusing your organization's employee drug test reports routinely sent to you by your laboratory vendor. You assume the samples were indeed processed, and that the results are "accurate." How can you know this with certainty? The question of competence usually focuses on methodological reliability, but there is also the possibility of outright fraud to consider, with disquieting precedent. In the late 1980's a scandal came to light within the EPA's Contractor Laboratory Program (CLP), wherein a number of CLP-certified labs performing environmental analyses for the government and Superfund liability clients were found to have doctored or simply fabricated many of their lab results, in one instance for more than a year. Eventually, disbarments and criminal convictions resulted, but such fraudulent practices had gone on undetected for quite some time, in a highly regulated environment with predominantly savvy clients requiring forensic quality analyses for use in contamination and/or exposure litigation.

In the case of mass workplace drug screening, how can technologically unsophisticated clients know whether all samples are in fact processed—that some percentage are not simply discarded to ease backlogs? After all, everyone seems content with low positive findings. If the customers are not submitting their own QC blinds—problematic in any event, given that laboratory personnel usually collect the workers' specimens—how can there be verification that all samples are fully processed? Do the labs stabilize and archive reserve aliquots of all samples for subsequent audit re-testing? For how long? Is such even possible, given current and proposed specimen volumes? Will SAMHSA/NIDA accreditation and oversight suffice, given its conflicting multiple roles in the "War On Drugs"? Such questions are unlikely to even come to mind for most drug testing clients. But they should.

Other matrices: Hair testing

Hair assays are based on the principle that, in addition to urine, feces, saliva, and sweat, a routine exit pathway of metabolic biochemicals is that of the hair and nails. The process is known as "keratinization," wherein trace amounts of a breadth of chemicals become entrapped and preserved within the hair shafts and nails. These chemicals are recoverable, identifiable, and quantifiable using sophisticated analytical methods, of which the hair drug test purports to be one. Psychemedics' RIAH®, or RadioImmunoAssay of Hair, is a patented process employing a proprietary chemical separation method in which specimens are processed through a number of chemical separation steps and adulterated with a radioactive "internal tracer." The tracer competes with immunoassay antibodies for chemical "binding" with the analytes of interest. Analyte (e.g., illicit drug) concentration levels are inferred by comparing the remnant radioanalyte tracer "count rate" in the production sample against the "known" disintegration count rate of the radionuclide reference standard. A "calibration curve" is established and production sample drug concentrations estimated from the end-process count rate (recall the foregoing discussion of methodologically similar serum RIA methods).

While RIAH® is in fact a rather sophisticated analytical process, valid methodological concerns remain:

- Nagging generalizability questions persist. Most of the "scientific" literature cited by the patent-holder is of their own paternity and consists of animal studies and investigations within clinical drug abuse rehab cohorts. Analytical accuracy extrapolations to the general population (and mass-production commercial analysis) should be viewed skeptically.

- Quality control realism issues: The vendor asserts that the drug user cannot wash the illicit metabolites out of the hair with any type of solvent/antidotes, but that the lab *can* "adsorb" QC spike concentrations "in" during analysis. True quality control realism would entail hair samples taken from a large cohort of volunteers who had ingested controlled amounts of the various illicit drug metabolites. Such cannot be done, for a host of what should be obvious reasons.

- Cross-reactivity concerns: Are we to believe that only illicit drug metabolites excrete into the hair? The potential cross-reactivity, false positive concerns that attend conventional urine and serum analyses (see above) also apply to hair testing. For the vendor to suggest that GC/MS confirmation assays may not need be run in certain settings is outrageous.

- There are a couple of overlooked sampling bias problems. First, the hair "sampling" protocol calls for snipping approximately 50 strands of hair from a location atop the head two inches posterior to a scalp midline figuratively "drawn" from ear to ear. Psychemedics' own technical literature admits that hairs taken from other areas of the body yield significantly less reliable results. Well, this sampling location is precisely where many males experience at least partial baldness. Consistent results require consistent sampling, recall.
  On a related note, one of the ostensible "virtues" of the hair test is its ability to "see back in time" to reveal a chronology of drug use. Human head air grows at roughly 0.5 inches per month. The RIAH specimen collection protocol calls for a 1.5" hair sample which will purportedly reveal a 90-day prior history of any illicit drug use, whereas urine tests only reveal very recent drug use—so drug users need only abstain for a short while to pass their urine tests. Well, the hair assay then discriminates in favor of bald men and against women. Balding or not, if John applies for a job or comes to work wearing a close-cropped "buzz cut," can there be any automatic adverse inference? But, can Jane show up just as unremarkably with, well, a "G.I. Jane" coiffure?

More on the 90-day analytical "look-back." It is telling that the RIAH technical literature touts the virtue of its lengthy "SW"—"surveillance window"—rather than referring to such in conventional drug bioassay terminology as the "DW," or "detection window." "Detection window" refers to the time during which metabolites are detectable prior to excretion to below analytically quantifiable concentration levels. The detection window for cocaine metabolites in urine, for example, is on the order of 1-3 days, and the urine DW for the fat-soluble, slower-to-purge THC

(marijuana metabolite) is 7-30 days (depending, of course, on consumption patterns).

For Psychemedics, quarterly hair testing would ensure ongoing "surveillance" of employees adequate to effect a "drug-free workforce" (semantically distinct from the mere "drug-free workplace"). A handy little marketing hook, for "surveillance" is truly the primary function of all suspicionless drug testing.

A recent published update on concerns regarding hair testing follows:

> Hair Tests Tangled in Problems: 1/7/98
>
> Nearly 80 percent of all U.S. firms rely on standardized urine tests for drug abuse. And while there is another type of test—the examination of hair strands, which is said to identify far more users than urine tests—federal authorities say there are some shortcomings to the process, The Philadelphia Inquirer reported Jan. 5.
>
> "The scope of drug testing is expanding dramatically, and with expanding hair testing, the likelihood of bias will increase, too. It's a major problem," warned J. Michael Walsh, executive director of the President's Drug Advisory Council under President Ronald Reagan and George Bush, and now a consultant to the urinalysis industry. One cause for concern, the experts say, is when hair tests are used on non-Caucasians. This group may test positive more often because researchers have found that traces of drugs last longer in thick, dark hair than thin, light-colored hair. Hair tests also can't catch recent drug use, the way urine tests can.
>
> The experts add that there is another problem with hair tests. To date, "hair analysis for the presence of drugs is unproven, unsupported by scientific literature or controlled trials," said Food and Drug Administration spokeswoman Sharon Snider.
>
> While urine tests can easily detect marijuana use, the experts say that hair tests are better at detecting cocaine and heroin use. With that in mind, there is a belief that that hair tests may someday be used in conjunction with urine analysis. "Hair testing may turn out to have a complementary role in workplace testing," said Robert Stevenson, deputy director of the Workplace Programs Division of the

federal Center for Substance Abuse Prevention, "but we have yet to resolve remaining questions about its fairness and the ability to interpret results consistently."[82]

"Backwash," or, wag the dog and baste the "turkey": Surveillance backlash

As argued previously, for drug testing to truly serve a maximally deterrent function, implementation would have to be not only highly visible, but also unpredictable. Not only ought selection be random, but also the testing intervals themselves, so that those under surveillance could know neither whether nor when they might be selected to provide a specimen. Moreover, specimen collection procedures should also be maximally vigilant to preclude the possibility of adulteration or switching.

While some programs (e.g., Defense Department testing protocols) explicitly call for close direct visual monitoring of urination during specimen collection, our social squeamishness in this regard has resulted in a good bit of laxity, and there is even much approving discussion of procedures that "allow for reasonable privacy and personal dignity concerns" in the Supreme Court opinions which have ruled thus far on testing programs. In *Chandler*, for example, the Court noted that the Georgia law permitted those to be tested to have their specimens collected by their own physicians at a time of their own choosing. No ostensible "privacy" issue there. In *Treasury*, the Court stated that specimen "donors" were subjected to neither proximate visual nor aural monitoring, also obviating privacy concerns. In *Railway*,

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[82] Join Together Online, 1-8-98, [http://www.jointogether.org], March, 1998.

it was noted by the Court that security procedures only extended to auditory monitoring by a same-sex overseer outside the secured stall—a negligible intrusion. Only in *Vernonia* were privacy considerations dismissed out of hand, for Opinion author Scalia concluded that (1) student-athletes are not otherwise fussy about locker-room physical exposure—including the use of communal urinals, and (2) even were they, students do not have full constitutional rights in any event.

Hard-liners insist that visual monitoring is an essential part of a complete "chain-of-custody" regimen essential to obviate evasion. The hard-liners have a point. But—never underestimate the resourcefulness of the evader. As recounted by John Coombs in Drug-impaired Professionals (see Chapter 2):

> Although testing procedures are carefully monitored to prevent cheating, addicts devise ingenious methods to escape detection (Coombs and West 1991). For example, a female clinician ran a feeder tube down through her buttocks. By leaning back against a urine-filled bag, she got the expected urine stream. A young anesthesiologist filled a small polyethylene bag with clean urine, palmed it, and, by squeezing the sides together, delivered the appropriate specimen in the appropriate arc when observed by testing personnel. A first his wife provided the specimen, but when she later refused, he substituted his dog's urine. "We didn't know we were analyzing the dog's urine until later when he told us" the testing director remarked.[83]

Rex! Here, boy; lift your leg; hold it right there . . . Well, we can put a stop to all evasive measures by requiring a full nudity strip search, right?

Wrong. Coombs continues:

---

[83] Coombs, op cit., pp. 184-5.

> A urologist catheterized his own bladder, removed his urine, substituted clean urine, and urinated clean urine under close supervision at the testing site.[84]

Wow. Former NFL lineman and author Tim Green recounts similar tactics in his recent book about life in the National Football League, The Dark Side of the Game, wherein Green describes how football players would sometimes use an ordinary kitchen turkey baster and catheter tube to inject clean urine back into their bladders prior to submitting to a drug test.

Wag the Dog; Baste the metabolite Turkey; Darth Evader strikes back.

Other matrices, continued: saliva and sweat

Saliva has been proposed as a viable alternative assay matrix for drug testing. Vendors of saliva testing services base its ostensible preferability on on-site convenience, meaning that screening can be performed on the spot by technicians requiring only minimal training. All the costly elements of laboratory assays (including chain-of-custody expenses) are obviated. Two recent items concerning saliva tests follow:

> Thursday January 15, 1998, 3:06 pm Eastern Time Company Press Release, SOURCE: Epitope, Inc.
>
> Epitope Announces FDA Clearance of Oral Fluid Assay for Cocaine
>
> BEAVERTON, Ore., Jan. 15 /PRNewswire/—Epitope, Inc. (Nasdaq: EPTO news) today announced that its research partner, STC Technologies, Inc., located in Bethlehem, Pennsylvania, has received FDA clearance for the STC Cocaine Metabolite Micro-Plate EIA

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[84] Coombs, op cit., p. 185.

(enzyme immunoassay) Kit for use in detecting cocaine and cocaine metabolites in oral fluid collected with the OraSure(R)/EpiScreen(R) Oral Specimen Collection Device manufactured by Epitope. "This is the first oral fluid-based immunoassay for drugs of abuse cleared by the U.S. Food and Drug Administration," said Sam Niedbala, Ph.D., executive vice president, research and development of STC . . . Drugs-of-abuse testing generally occurs in one of four basic testing segments: 1) Clinical testing including hospital emergency rooms, laboratories, and drug rehabilitation centers, 2) government mandated testing, such as testing of transportation workers (D.O.T.), defense contractors (D.O.D.), and other governmental contractors, 3) forensic testing, including applications in the criminal justice system, law enforcement, the courts, and probation/parole programs, and 4) industrial testing for employment evaluation and drug-free workplace programs. In each of these segments OraSur testing will provide an alternative for sample collection that can be performed in any setting, is non-invasive, is less embarrassing, and improves the chain of custody.

SALIVA AS AN ANALYTICAL TOOL IN TOXICOLOGY

Karin M. Höld, B.S.; Douwe de Boer, Ph.D.; Jan Zuidema, Ph.D.; Robert A.A. Maes, Ph.D.

(from ABSTRACT)

"Due to our present incomplete knowledge of saliva as a biological specimen, saliva drug levels should be used concomitantly with recorded drug concentrations in other fluids, e.g. plasma, to contribute to a more ideal interpretation of drug concentrations in clinical and forensic case studies."[85]

While the saliva test will be marketed initially as an alternative drug abuse assay, it will invariably end up being an addition to conventional lab methods, resulting not in savings but in additional employer expense.

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[85] International Journal of Drug Testing, Fall 1996, [http://big.stpt.usf.edu/~journal/hold.html], March, 1998.

The "Patch"

PharmChem, a drug testing marketer based in Menlo Park, California, recently received FDA clearance for sales of its drug abuse sweat patch. This adhesive device is actually a replacement for the urine sample vial rather than a method of detecting the presence of drugs directly. The patch, applied to the body for a week or two, absorbs sweat and retains it until the strip is analyzed via GC/MS in the lab. NIDA, while interested in the potential of this matrix (as an ongoing surveillance device), cautions that it presently encumbered by high false positive potential. While the FDA authorization pertains to criminal justice applications, PharmChem is reported to be seeking approval to market this technology to the employment sector.[86]

"Character" testing: Handwriting analysis and the "MMPI Lite" (Substance Abuse Subtle Screening Inventory)

Can we uncover actual or potential "drug abusers" by subjecting them to "character" tests rather than the invasive bioassay methods that are so contentious? Use of lie detectors is largely proscribed by law, and hiring private detectives to shadow people to surveill and assess their "moral habits" is impractical, so some companies have tried administering psychological assessment instruments to discern "moral character defects" such as drug-seeking propensities or, more generally, "dishonesty" and "laxity" traits. Some employers have tried handwriting

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[86] *Sweat Testing May Prove Useful in Drug-Use Surveillance*, National Institute on Drug Abuse, [http://www.nida.nih.gov/NIDA_Notes/NNVol10N5/Sweat.html], March, 1998.

analysis, for example (see below), while others administer "personality tests" to weed out undesirables.

> An acquaintance of mine was turned down recently for a job. The hiring firm told her that she was rejected because their handwriting analysis had shown that she was not "open to learning." Use of handwriting analysis ("graphology") to screen prospective employees is widespread in France and is becoming more common in both the United Kingdom and America. While job interviews, applications and recommendations remain the preferred screening techniques, more than 5% of American companies used graphology when hiring as of 1990. That number has almost certainly increased during the last few years with well-known firms like Citibank and Bristol-Myers experimenting with the technique.
>
> Consultants who advocate graphological screening claim that such analysis is able to reveal important character traits of job applicants. While analysis cannot disclose a person's age or sex, it allegedly can discern (at relatively low cost) character traits of a potential hire—e.g., a candidate's stability, vivacity, creativity, intelligence, imagination, reasoning ability, speed of thinking, and force of character. In addition, graphologists maintain that their skill is extremely useful in identifying pedophiles, sociopaths, persons with cancer, schizophrenics, and epileptics. Some go so far as to maintain that the individual's entire personality structure appears in his or her handwriting. The individual is said to have no secrets before the graphologist who supposedly can tell one's private sexual likes and dislikes from a handwriting specimen.[87]

Like suspicionless drug testing, "character" evaluation in the workplace is also a very controversial area, for employment evaluations are by law supposed to be limited to job-skills suitability (with the limited exception of inquiry into prior criminal convictions). The Target discount store chain, for example, was successfully sued several years ago over its use of the MMPI (Minnesota Multiphasic Personality

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[87] Daryl Koehn, Ph.D., *Handwriting Analysis in Pre-Employment Screening*, The Online Journal of Ethics, DePaul University, Chicago, IL, [http://condor.depaul.edu/ethics/hand.html], March, 1998.

Inventory) in assessing employment candidates' "character." The MMPI is a clinical diagnostic instrument appropriate only for the evaluation of psychopathology in *clinical* settings.[88]

A Florida firm, CERA, Inc., now touts to businesses a paper-and-pencil 88-question "chemical dependency" test known as SASSI-2, the "Substance Abuse Subtle Screening Inventory," purporting to identify actual or potential drug abusers, with a claimed "overall 94% accuracy level." Essentially a pared-down and more narrowly-focused MMPI knock-off, this instrument is marketed as a cost-effective alternative to traditional employment urine screening. The job applicant or employee completes the test—said to be written at a 6th-grade comprehension level—in 10-15 minutes. It is then faxed to the vendor, where it is "scored" and interpreted. The results are then faxed back to the client within the hour. The SASSI instrument is said to be unaffected by age, gender, and educational level factors—i.e., that is "generalizable" and suitable for broad employment application. Is this so?

A brief look into the SASSI validation methodology documentation follows:

> This is to summarize the reliability and validity of the Substance Abuse Subtle Screening Inventory (SASSI 2). The SASSI-2 is a psychological assessment tool designed to identity those who have a substance-related disorder. This instrument is currently used by hundreds of organizations including addictions treatment centers, hospitals, other health care organizations, and employee assistance programs in corporate settings.
>
> Sample:

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[88] See *Soroka v. Dayton Hudson Corp.*, No. AO52157, 10-25-91. See also *Getting Personal*, ABA Journal, Vol. 78, Jan. 1992, pp. 66-67.

> These findings are based on the results of 2,954 respondents. Ninety percent of this sample consisted of clients from a variety of treatment programs throughout the country, including psychiatric hospitals, addictions treatment centers, a dual diagnosis hospital (substance abuse and psychiatric), a sex offender treatment program, a vocational rehabilitation program and a county detention center. The remaining ten percent consisted of college students and a group who responded to a newspaper ad requesting subjects with a family history of alcohol use. Sixty-six percent of the total sample was male. Sixty percent of the sample was Caucasian, 22% was African-American, and 11% was Native American. Forty-one percent reported never being married, whereas 30% were married and 25% were divorced. The average age of this group of respondents was 32, and the average educational level was tenth grade. Thirty-six percent of the sample (n =1,053) had been interviewed and diagnosed by a trained clinician. Of those interviewed, 75% were diagnosed as being dependent on alcohol and/or some other substance.
>
> Accuracy In Identifying Substance Use Disorders . . . Combined Sample (n=839)
>
> Prevalence of Disorder: 80%
> Sensitivity: 94%
> Specificity: 94%
> PPP: 98%
> NPP: 80%
> Overall Accuracy: 94%
>
> . . . results indicate that the SASSI-2 is a reliable and valid measurement tool and support its use for clinical assessment. The overall reliability coefficient for the SASSI-2 (coefficient alpha) was found to be .93, and supplementary analyses support the reliability of the SASSI-2 subscales. The SASSI-2 was found to correspond highly with independent clinical diagnoses. The SASSI-2 was also associated with theoretically related criteria (e.g., substance-related arrests and the number of illicit drugs used) but unassociated with theoretically unrelated criteria (e.g., intelligence, reading and arithmetic tests).

This is a rather glaring example of selection bias in a putative "validation" sample. These vendors cannot sustain generalizability claims given the homogeneity of this research group. This type of methodological myopia is something of a syndrome in drug abuse research generally. Clinicians working with drug rehab

clientele routinely probe the psyches of their "patients" and sometimes "publish" their findings—"market" would be the more apt term—as characteristic of the general population without any serious effort to evaluate the salient attributes of non-problem "control group" cohorts. Indeed, our ostensible clinical understanding of the true nature of "addiction" is burdened by this type of limitation, for, we cannot just randomly select subjects representative of the general population for continued controlled dosing with psychoactive chemicals with the intent of analyzing the proximate and long-term outcomes. Such would be at once illegal and unethical.

The SASSI validation report contains a couple of oddities. First, it jumps from a discussion of the demographic attributes of the 2,954 validation pool respondents straight to prevalence and "accuracy" tabulations based on a "Combined Sample (n=839)" of a "SASSI-3," with no explanation of the difference in the cohort sizes or whether SASSI-2 and SASSI-3 are the same instruments. Second, there is no information presented anywhere in the report on the derivation of the "specificity" percentage of "94%." Recall that specificity refers to the power on a measure to correctly identify and exclude "true negatives." Given the small "n" and obvious sampling bias in gathering of this cohort, it is far from clear that the number "94%" has any precise (and independently replicable) meaning. A homogeneous, mostly captive clinical cohort of undereducated, intoxicant-prone subjects purporting to represent a validation anchor certifying the general employment assessment propriety of this instrument is dubious at best.

Also interesting is that this vendor also touts its method as a cost-effective *alternative* to traditional lab drug testing, but then goes on to embellish the asserted accuracy of SASSI with the following:

> The utility of the SASSI has been demonstrated in clinical research with thousands of individuals. When used sequentially with urine drug testing the published accuracy rate is 99%.[89]

Well, is SASSI a cost-effective *replacement* for the urine screen, or one more methodologically suspect auxiliary expense?

Employer expense questions aside, any drug-free individual consenting to submit to this "test" should perhaps be IQ tested as well.

Commercial drug testing: market considerations

Vendors of drug testing services operate in an intensely competitive, low-bid market. True forensic "cost-plus" pricing is impractical, for employers and administrators want to keep screening costs as low as possible (hence quiet proposals to do away with the relatively expensive GC/MS confirmations for pre-employment screens). Recent stock market performance histories of major publicly traded testing firms are, in the aggregate, less than exhilarating. Several examples below illustrate the circumstances:

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[89] SASSI Validation document [http://www.cerainc.com/html/sassi.html], March, 1998.

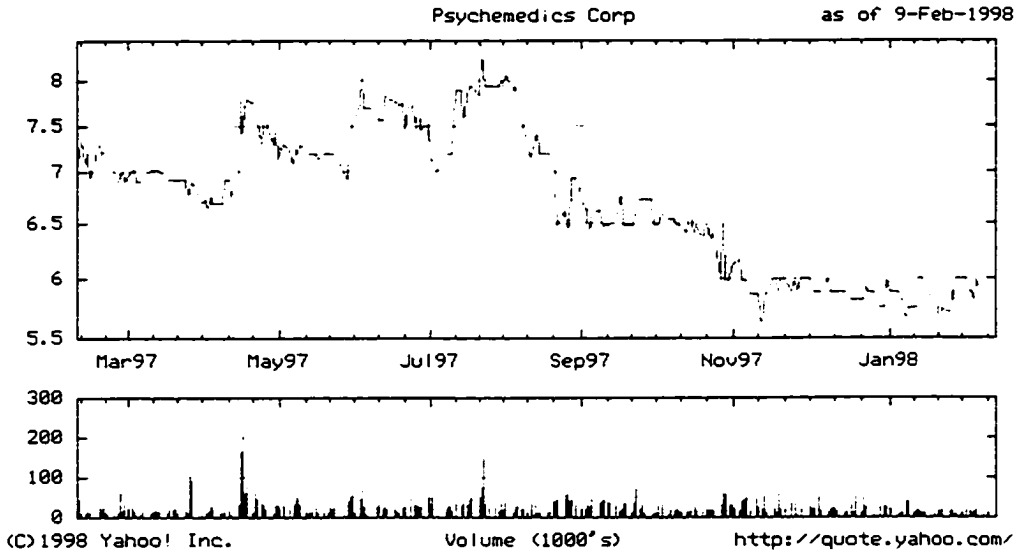

Figure 2: Psychemedics Corporation recent stock history

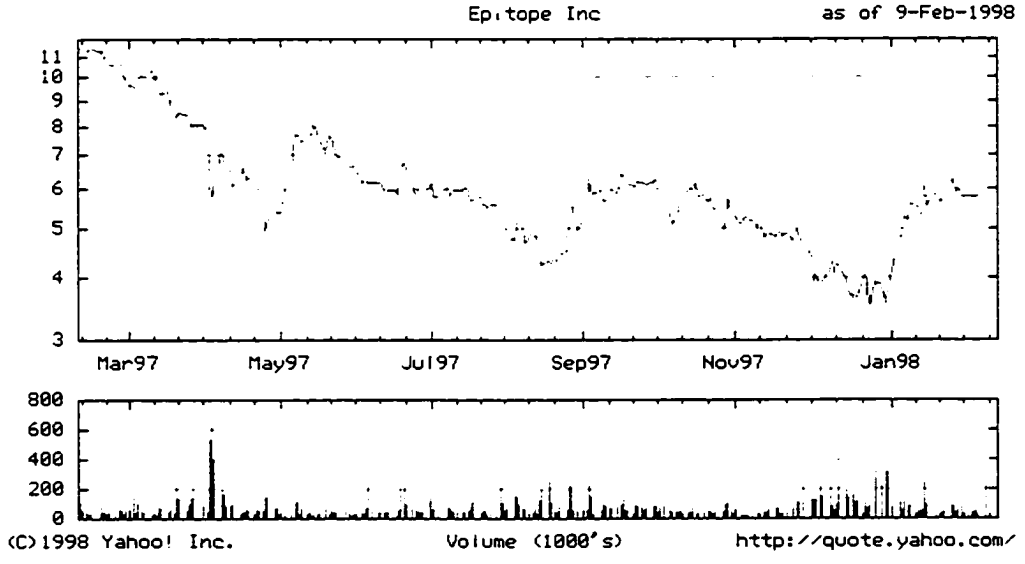

Figure 3: Epitope. Inc. recent stock performance history

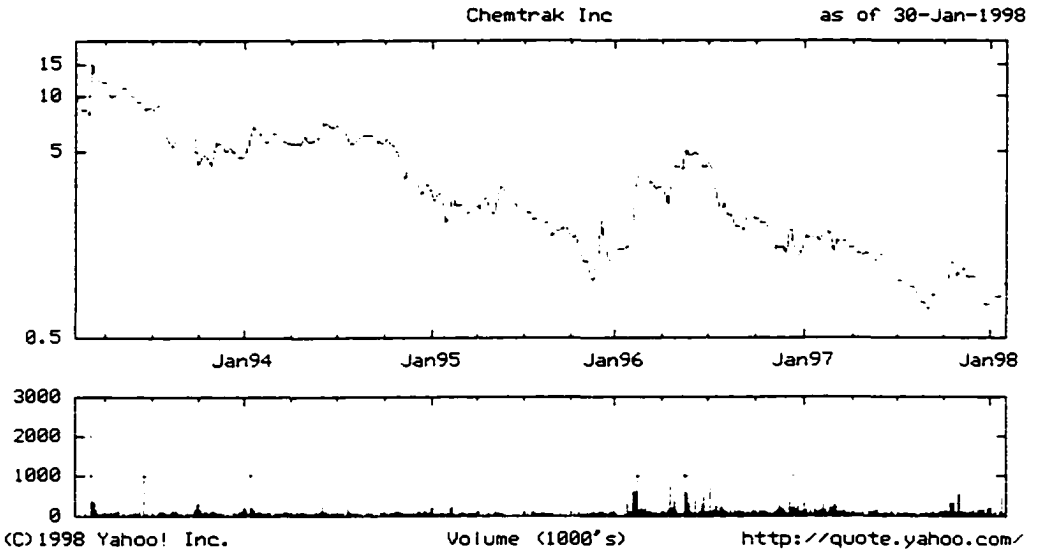

Figure 4: Chemtrak, Inc. recent stock performance history

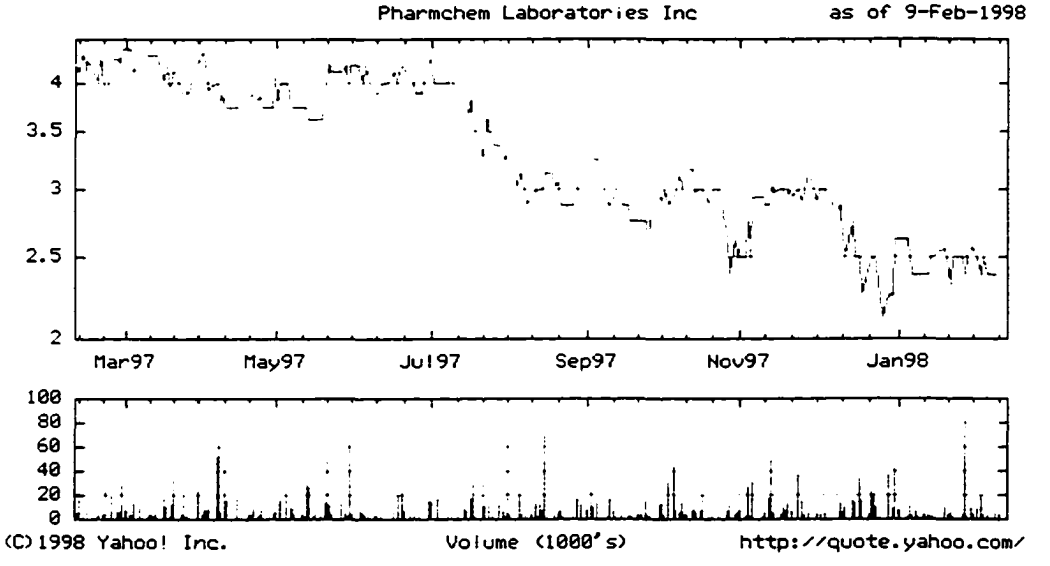

Figure 5: Pharmchem, Inc. recent stock performance history

Psychemedics (NASDAQ ticker symbol: PMD), heretofore an aggressive marketer of employment hair testing, recently began hawking a home-test kit (the

PDT-90) sold through discount drug store chains and pitched to worried parents. Epitope (NASDAQ ticker symbol: EPTO) is likely banking on its recently FDA-approved saliva test OraSure® (developed in partnership with STC Technologies, Inc) to help reverse the negative slope of its stock performance. OraSure® is aimed at the employment screening market, and is portrayed as a convenient and cost-effective "onsite" alternative to traditional lab services. Chemtrak, Inc. (NASDAQ ticker symbol: CMTR), a vendor of a variety of home-test and physicians' internal office lab assays, has struggled with declining share prices for years. They are hopeful that their new "Parent's Alert" home drug-testing kit will improve their fortunes. PharmChem (NASDAQ ticker symbol: PCHM) is the vendor of a variety of drug testing products and services, among them the recently FDA-approved drug-detecting skin "sweat patch."

Quite a cohort of stock performance downhill skiers. For context, a graphic illustrating aggregate market performance during the same period is provided below.

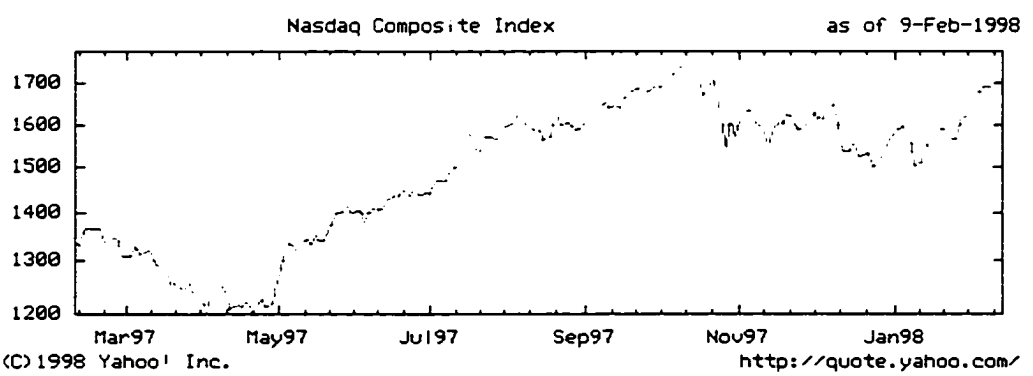

Figure 6: NASDAQ composite recent history

It is indeed a tough market for vendors of drug screening products and services (as the foregoing graphs indicate). In 1997 a major vendor of traditional employment-sector urine screening, U.S. Drug Testing Corporation, succumbed and was liquidated in Chapter 7 bankruptcy proceedings.

In such a difficult arena, two imperatives obtain. First, expanded market share is critical to eventual profitability, hence the enlistment of legislative collaborators through "educational" organizations whose activities focus on enactment of mandatory drug-testing laws, such as The Alliance for Model State Drug Laws and kindred lobbying groups such as The Institute for a Drug-Free Workplace. Second, there is ceaseless pressure to cut costs in the labs. Employee attitude surveys in laboratory journals reflect these circumstances, revealing a litany of discontent caused by excessive workloads, inadequate resources and pay, lack of training, understaffing, low morale, and high turnover.

Those who opted for laboratory careers with TV ad images of Glaxo Glory and "*Dou'-Lets-Ya-Do-Great-Things*" clinical whitecoat glamour in mind come to be considerably less than ecstatic working in high-stress, mass-production, methodologically banal environments having more in common with poultry processing plants than intellectually stimulating scientific enclaves. Yet we propose to exacerbate the infrastructure burden by proposing more unjustified suspicionless drug screening at every turn.

These minds, machines, and methods can be put to much better uses.

Summary thus far:

Drug policy historical and political contexts are anything but rational (Chapter Two). Likewise for the epidemiological and social science empirical foundations (Chapter Three). The present chapter examines some of the core issues that call into serious question popular assumptions regarding the "accuracy" of commercial laboratory science and the wisdom of committing so much of the bioassay infrastructure to these dubious ends. Next: Is any of this truly legal? In Chapter Five we see how historical ignorance, political dissembling, and scientific naiveté combine with jurisprudential amnesia to turn the Fourth Amendment on its head.

CHAPTER FIVE

Drug testing and Constitutional law: *clamorem et uthesium*

Does suspicionless drug testing violate the United States Constitution, more specifically the Bill of Rights—in particular the Fourth Amendment— irrespective of whether the policy is directly promulgated by the government or enacted in the private sector? Yes. We will prove this assertion in this chapter, beginning with a look into the paternity of our Constitutional right against unreasonable search and seizure, continuing with an examination of the relevant Fourth Amendment jurisprudence that followed the founding of our nation, and concluding with a consideration of the moral underpinnings of our American Constitutional rights heritage.

Cuddihy: evolution of the Fourth Amendment

We have all heard the phrase "hue and cry," which for most is simply taken to mean social clamor or indignant uproar over some public controversy. And, if ever there were a widespread, sustained, and vociferous modern "hue and cry," the concern over and campaign against drug abuse ranks at the top, with many polls reporting sentiment ranking "drug abuse" as our number one social problem and "domestic threat." A core question examined by this thesis is whether the "threats"

posed by recreational intoxication and "addiction" are sufficiently grave as to overwhelm our law enforcement infrastructure and consequently justify abrogation of the privacy provisions of the Constitution through suspicionless drug testing programs. What of this contemporary "hue and cry" from a historico-jurisprudential perspective?

According to William J. Cuddihy's exhaustive 1990 Claremont Graduate University Ph.D. Dissertation Origins and Original Meaning of the Fourth Amendment (cited by Justice O'Conner in *Vernonia v. Acton et ux*) "hue and cry," was much more than a mere colloquial expression in the European middle ages from which we trace our American jurisprudential heritage—it was a legal term of art, one we today would equate with vigilante mob "justice" and/or deputization of the private sector for the suppression and/or punishment of wrongdoing. The 1950's "b-movie" image of angry villagers—pitchforks, clubs, axes, and torches held high—marching en masse on Baron Frankenstein's castle to mete out a bit of harsh summary justice comes readily to mind. Such is indeed historically accurate: formally announcing a "Hue and Cry" obligated one's fellow citizens to participate in the ensuing unbridled pursuit and searches of suspects. Cuddihy finds the earliest official references to Hue and Cry—*clamorem et uthesium*—in 13th century European legal documents.

Cuddihy's work traces the development of social norms and codified legal restraints against excessive search and seizure doctrines from ancient times through the period of the American Revolution. He recounts in minute detail the

evolution of practices involving civilian-led or assisted Hue and Cry episodes into general warrantless searches conducted by formal authority, codifications of unencumbered "general warrants," and, finally, the English and colonial applications of "General Writs of Assistance"—which were in effect Hue and Cry gussied up in Parliamentary statute, the intent of which was the augmentation of the relatively meager resources of officialdom with the enforced assistance of the private sector.

A small sample of Cuddihy illustrates the 15th to 17 century developments:

> Between 1485 and 1642, the English law of search and seizure underwent a radical transformation. With other factors, that transformation caused the equally far-reaching changes that began to occur in English thought on search and seizure a century later, after 1580.
>
> The Tudor monarchs had not only the capacity but mighty incentives to enlarge the general search into a powerful weapon of social, political, economic, and intellectual control. During the Tudor and early Stuart periods, the applications of the search process proliferated from three to fifteen categories: (1) vagrancy, (2) recreation, (3) the apparel that the lower classes wore, (4) the hue and cry, (5) the Crown's pursuit of accused persons, (6) the recovery of stolen possessions, (7) game poaching, (8) economic regulation, (9) sumptuary behavior, (10) bankruptcy, (11) weapons, (12) the customs and importation, (13) the guilds, (14) censorship, and (15) the suppression of political and religious unrest.
>
> In all fifteen categories, the law authorized general searches during all or part of the period from 1485 to 1642. Everything from the food that an Englishman put in his mouth and the cap that he wore on his head to the thoughts circulating in his mind came to furnish legal pretexts for the government to inspect his home. English law defined a man's house as his castle in 1485 and as his government's castle a century later.
>
> Parliament, the Stuart kings of 1603-49, and local governments all participated vigorously in this expansion, but the Tudors were the master architects, for the methods of general search that they

> pioneered changed but little over the next three centuries despite the multitude of uses to which they were put. This growth in the types of searches, in turn, was a major impulse to the protests that initiated the movement for a right against unreasonable search and seizure.[90]

Cuddihy cites numerous instances detailing the evolution of Hue and Cry and its investigative progeny through the next hundred-odd pages of his dissertation. Particularly noteworthy are his recitations of the use of Hue and Cry to suppress the "debaucherous recreation by workers and servants." (p. 315) He also makes what is for our purposes a most telling observation:

> Incorporation of the general search into the hue and cry was especially significant. A cornerstone of criminal procedure for a millennium, the hue and cry applied whatever methods it absorbed against the growing list of problems that it addressed after 1580: theft, poaching, vagrancy, and dissent. One effect was to insure that numerous houses could be searched not only when plots against the government were afoot but every time someone's shirt was stolen or a deer was poached to feed some hungry mouths. While the religious controversies of the 1580s and 1590s generated a stream of routine general searches, the simultaneous incorporation of the same kind of searches into the hue and cry turned the stream into a continuous flow.
>
> Once entrenched as an essential element of the hue and cry, general warrants and promiscuous searches were all but guaranteed an extended longevity, for the hue and cry was an indispensable component of Tudor-Stuart law enforcement. The counterpart to the modern police force in Tudor-Stuart England consisted of little more than a night watch of citizens in each town to discourage nocturnal brigandage and several dozen unpaid justices of the peace superintending several times that number of sheriffs, unsalaried constables, and lesser officials.
>
> Petty constables and their power to requisition assistance were the linchpin of the system. A constable or two was usually selected in each parish, manor, or village on the expectation that he would

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[90] William J. Cuddihy, Ph.D., Origins and Original Meaning of the Fourth Amendment, Volume I, Claremont Graduate University doctoral dissertation, 1990, pp. 80-82.

> suppress most crimes and catch wrong-doers on a part-time basis while still working full-time at his accustomed profession. Whenever the magnitude of the crime exceeded the individual resources of local officials, they commandeered their neighbors into helping them. In effect, the overburdened constable forcibly deputized every adult male in the vicinity whose assistance he thought might be appropriate to accomplish his assigned task. General search warrants were a frequent device for expediting this process, for nearly all of them authorized the bearer not only to search all suspicious places but also to requisition such assistance as he needed to do so. The general warrant and its power to commandeer assistance were interwoven elements in a system of penurious law enforcement.
>
> Furnished with such a warrant, a constable could call out his neighbors and oversee a prolonged, far-reaching search. To accomplish lesser results today, however, would require a multitude of specific search warrants, each obtained from a magistrate after due cause shown, and numerous full-time policemen to serve those warrants.[91]

Except where the present-day War on Drugs is concerned, for which our puny federal constabulary feels compelled to resurrect the Hue and Cry, Fourth Amendment heritage notwithstanding. Recall Ronald Reagan's Executive Order 12564 ("*Drug-Free Federal Workplace Order*") and its most revealing passage:

> The use of illegal drugs, on or off duty, by Federal employees is inconsistent not only with the law-abiding behavior expected of all citizens, but also with the special trust placed in such employees as servants of the public.

The "law-abiding behavior expected of all citizens . . . " Such compliance was to be enforced extrajudicially through the use of the employee drug test. Steven L. Nock observes:

> Indeed, the testing component is the only significant part of this executive order. Illegal drugs, by definition, are illegal, so there was

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[91] Cuddihy, op cit., pp. 194-96

> little an Executive Order could do about enforcement of existing laws. Clearly, existing judicial practices were perceived by the President to be ineffective. Executive Order 12564 must be seen as a statement that normal judicial procedures were inadequate: only extreme measures, in this case drug tests, would do.[92]

In other words, General Writs revisited. According to Cuddihy and other historians, it was the reviled General Writs and the abuses they permitted in the colonies that were among the primary causes of the American Revolution. For example, as recounted by O.M. Dickerson in Writs of Assistance as a Cause of the Revolution, "[W]rits of Assistance were legalized by a series of acts of Parliament giving the customs officers authority to search for and seize uncustomed goods." Dickerson cites pertinent provisions of the 1664 Act, (13 and 14 Car. II, c. 11, cl. 5):

> And it shall be lawful to or for any person or persons, authorized by writs of assistance under the Seal of His Majesty's court of exchequer, to take a constable, headborough, or other public officer inhabiting near the place, and in the daytime to enter, and go into any house, shop, cellar, warehouse, room, or other place and in case of resistance break open doors, chests, trunks, and other packages, there to seize, and from thence to bring, any kind of goods or merchandize, whatever, prohibited, and uncustomed . . . [93]

General enlistment of the private sector in the unfettered search for whatever prohibited goods the government thought it exigent to suppress. Greenhalgh and Yost note that, by the 1750's

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[92] Steven L. Nock, The Costs of Privacy: Surveillance and Reputation in America, (New York, Aldine De Gruyter, 1993), p. 100.

[93] O.M. Dickerson, *Writs of Assistance as a Cause of the Revolution*, The Era of the American Revolution, Morris, R., Ed., (New York, Columbia University Press, 1939), pp. 43-44.

> . . . the English believed that common law search warrants were insufficient to curb smuggling. The requirement of articulating the specific location of the contraband before a justice of the peace or magistrate made it difficult for the government to obtain a common law search warrant. The Writ of Assistance, however, had proved itself to be a more effective enforcement tool. By 1760, its use in the colonies had become commonplace. The Writ of Assistance commanded "all" persons to assist an official, when requested, in conducting a search and seizing persons and/or property . . . The writs were issued without prior judicial screening. Their use was not limited to searching places for particular persons or objects. The writs granted boundless discretion to the officer.[94]

As Cuddihy makes incontrovertibly clear in the more than 1,200 pages of his dissertation devoted to the 18th century colonial political and legal conditions, revolution, and codification of the Bill of Rights, it was the explicit intent of the victorious American revolutionists who framed our Constitution to enshrine in our Bill of Rights a clear condemnation and prohibition of arbitrary and excessive searches that had for centuries taken place under color of the Hue and Cry.

The implications for indiscriminate drug testing

As discussed elsewhere in this thesis, the four U.S. Supreme Court drug testing rulings to date (*Skinner*, *Von Raab*, *Vernonia*, and *Chandler*) all include the full text of the Fourth Amendment and acknowledge its centrality to their holdings, stipulating that drug tests in fact constitute "searches" within the purview of the Amendment. The threshold questions, as enumerated by the Court, are thus far:

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[94] William J. Greenhalgh & Mark J. Yost, *In Defense of the "Per Se" Rule: Justice Stewart's struggle to preserve the Fourth Amendment's warrant clause*, American Criminal Law Review, Vol. 31, No. 4, Summer 1994, pp. 1031 - 1040.

[1] Whether those seeking to test are "state agents." This question owes to the distinction made between Constitutional protections afforded citizens against governmental activities and the tort remedies applied to privacy violations committed by private parties. This distinction is crucial to the legality of all manner of indiscriminate surveillance of employees and others in the private sector. It is in many ways a spurious distinction. Recall my citation of *Griggs v. Duke Power*. In *Griggs*, the Court upheld the constitutionality of Title VII of the Civil Rights Act, specifically with respect to illegal employment discrimination. Employers may not discriminate on the basis of non job-related criteria. The nominal issue in *Griggs* was race—the exclusion of blacks from employment with or promotion within Duke Power on the basis on irrelevant paper-and-pencil tests and diploma requirements. The language of Title VII refers to "race," "gender," "religion," and "national origin." *Griggs* makes no mention of "political affiliation" (or age, hair color, preferred TV shows, favorite sports teams, and so on). No one seriously doubts, however, that an employer inquiring into, say, the political convictions and/or affiliations of employees or job applicants would be in violation of a constitutionally protected privacy right. The right to political and otherwise "associational" privacy is by now a Constitutional commonplace. The only logical and moral interpretation of *Griggs* is that if it's not demonstrably job-related, it's Constitutionally impermissible, and is fundamentally much more than a tort issue.

A second issue arises out of the "state agent" public/private distinction. Courts hold that where the government mandates or is otherwise significantly involved in the enactment of drug testing policy, Fourth Amendment restrictions are more

closely implicated. Officials invariably assert that private firms and institutions implement suspicionless drug testing for health, safety, and productivity reasons having no connection to government requirements or exhortations. A quick internet visit to the federal Center for Substance Abuse Prevention (CSAP) online catalog, however, belies the claim. Among the numerous pro-testing materials available—courtesy of your tax dollars—two items are particularly vivid:

> We're Putting Drugs Out of Business
>
> Organization: Partnership For a Drug Free America Year: 1987 Format: Ad slick Topic: Alcohol and Other Drug Intervention/ Treatment, Workplace Target Audience: Employees Setting: Government and Workplace Readability: Easy Availability: Partnership For a Drug Free America, 405 Lexington Avenue, 16th Floor, New York, NY 10174
>
> This is a black and white ad slick of a closed door. The door reads "Corporate Drug Testing." The top of the slick reads "At This Point Your Alma Mater Doesn't Matter." The bottom of the slick says, "We're Putting Drugs Out of Business." Also included are facts about drugs in the workplace and how much money is lost because of drug use.
>
> We're Putting Drugs Out of Business
>
> Organization: Partnership For a Drug-Free America Year: 1987 Format: Ad slick Target Audience: College Students and Employees Setting: Government and Workplace Readability: Easy Availability: Partnership For a Drug-Free America, 405 Lexington Avenue, 16th Floor, New York, NY 10174. This slick pictures seven test tubes. Six test tubes have a clear substance in them and one test tube has a black liquid in it. The test tube that has a black liquid in it reads "Positive." The top of the slick reads "Four Years of College Down the Tube." The bottom of the slick says "We're Putting Drugs Out of Business." Also included are facts about drugs in the workplace and how much money is lost due to drug use.[95]

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[95] *We're Putting Drugs Out of Business*, Partnership for a Drug-Free America, [http://www.health.org/pubs/resguide/pwplace.htm#Sec1], March, 1998.

The first item clearly implies that, indeed, your C.V. counts for nothing, that the drug test shall have "controlling force"—Title VII and *Griggs* notwithstanding. The second item additionally implies, in rather creative fashion, a workplace drug abuse prevalence of 14.3% (1 out of 7 positive). Neither address the fact that the bulk of health, safety, and productivity losses in industry owe to factors other than illicit drug use. Both prove "state agency" with respect to private sector drug testing, as does the easily obtained Federal Register announcement below:

> DEPARTMENT OF HEALTH AND HUMAN SERVICES Substance Abuse and Mental Health Services Administration Center for Substance Abuse Prevention; Notice of Meeting
>
> Pursuant to Public Law 92-463, notice is hereby given of the meeting of the Drug Testing Advisory Board of the Center for Substance Abuse Prevention in April 1997. The Drug Testing Advisory Board (DTAB) is having a 3-day scientific meeting to discuss drug testing alternative specimens and technologies as they apply to workplace drug testing programs. The entire meeting is open to the public; however, attendance by the public will be limited to space available. The first two days will consist of presentations on the principles and criteria of workplace drug testing program requirements and industry representatives discussing alternative specimens/technologies (urine, hair, saliva, sweat, and non-instrument based on-site tests). The presentations will be focused on the following areas for each alternative specimen/technology: specimen collection and chain of custody, initial test reagents and procedures, confirmatory test procedures, internal quality control program, reporting test results, interpreting test results, and an external quality assurance program. On the third day, the DTAB will review the presentations, identify areas of concern, and make recommendations concerning those specimens/technologies for workplace drug testing. Interested persons may present information or views, orally or in writing, on these issues pending before the Board. Those desiring to make formal presentations should notify the contact person before March 7. A coordinator for each alternative specimen/technology will select the presenters. The presenters who will discuss the underlying principles and criteria for each major topic are required to submit their presentations in writing at least four weeks before the meeting. These will be shared with all presenters at least 3 weeks before the meeting. The presenters describing how each

> type of specimen and/or technology satisfies, or does not satisfy, the requirements (each presentation is limited to 15 minutes) are required to submit their presentations in written form at least two weeks before the meeting. These will be shared with all presenters. An agenda for this meeting and a roster of board members may be obtained from: Ms. Giselle Hersh, Division of Workplace Programs, Room 13A-54, 5600 Fishers Lane, Rockville, MD 20857, Telephone: (301) 443- 6014. Substantive program information may be obtained from the contact whose name and telephone number is listed below.
>
> Committee Name: Drug Testing Advisory Board. Meeting Date: April 28-30, 1997. Place: DoubleTree Hotel, 1750 Rockville Pike, Rockville, Maryland 20852. Open: April 28-30, 1997, 8:30 a.m.-5:00 p.m. Contact: Donna M. Bush, Ph.D.: Executive Secretary, Telephone: (301) 443-6014 and FAX: (301) 443-3031.
>
> Dated: February 12, 1997. Jeri Lipov, Committee Management Officer, SAMHSA. [FR Doc. 97-3956 Filed 2-18-97; 8:45 am] BILLING CODE 4162-20-P.[96]

Or, review the drug testing program implementation advice provided to employers by the U.S. Department of Labor website:

> Drug and alcohol testing by itself is not a substance abuse program. Many companies, however, believe that, when combined with the other components of a comprehensive substance abuse program, testing can be an effective deterrent to substance abuse and an important tool to help employers identify workers who need help.
>
> Though setting up a testing program is not a simple process, every year more and more companies of all sizes are doing so. Some establish programs because they are required to by state or federal laws or regulations. Others test to take advantage of incentive programs made available through the state or an insurance provider. Still, others do so because it is the right business decision for the company . . .
>
> Drug testing has been gaining in popularity in the private sector for the past decade. During that time, many safeguards and confidentiality measures have been developed to ensure the quality

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[96] Federal Register: February 19, 1997 (Volume 62, Number 33) [Notices] [Page 7468-7469] From the Federal Register Online via GPO Access [wais.access.gpo.gov] [DOCID:fr19fe97-85]

> and accuracy of drug testing. In addition, laws and regulations have been passed that govern how programs must be set up and run. Before implementing a testing program, you would be well advised to contact an individual or organization with expertise in drug and alcohol testing issues to help you establish your program.[97]

Unfortunately, partisan, self-interested, pro-surveillance individuals and organizations smiled upon and promoted by the government are thought to be the only ones "with expertise" in drug testing policy.

It is simply beyond dispute that our government is deeply involved in the marketing of drug testing in all workplace domains, public and private-sector. Anyone in need of more evidence need only examine the activities of The National Alliance for Model State Drug Laws (see Appendix A), a federally-funded non-profit tax-exempt § 501(c)(3) "charitable organization" whose overt mission is to help state legislatures enact comprehensive anti-drug laws that include indiscriminate drug testing of private sector employees. The supposedly public/private distinction delineating the boundary of the reach of the Fourth Amendment has been hammered into oblivion.

[2] Whether the state or its designee has a compelling interest sufficient to trump individuals' privacy rights. This question turns on empirical assertions of exigency: are the nature, extent, and cost of drug abuse in fact sufficiently adverse to warrant extreme measures? As we have seen elsewhere in this work (e.g., Chapters 1 and 2), the pertinent characteristics and aggregate severity of the drug problem—and the

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[97] U.S. Department of Labor, [http://www.dol.gov:8001/said.nsf/Workplace/Step+Five?OpenDocument], March, 1998.

likelihood that indiscriminate drug testing can serve as a significant deterrent (Chapter 3)—are hotly disputed by a host of competent researchers. Moreover, *laws* exist to deal with the "problem." Twentieth century American law enforcement agencies bear no resemblance whatever to their feeble 16th century constabulary antecedents. Enforce the law *within* the law; extrajudicial measures are beyond the pale of Constitutional legitimacy.

[3] Whether the privacy intrusions are minimal relative to legitimate state interests. Constitutional validity should not be regarded as a function of the proximal "severity" of the intrusion. Yes: collection of a urine sample is less invasive than that of an IV blood sample, and far less invasive than, say, forced stomach pumping or body cavity examinations in search of contraband. But "loss of privacy" need not even entail physical contact and/or bioassay. If an unmarked police van outfitted with the latest surveillance technology monitors your house without cause, its operatives capable of listening to your most intimate conversations and monitoring your movements via ultrasonic, infrared, or other imaging equipment, your privacy has been violated as surely as had your blood been drawn or stomach forcibly evacuated—and arguably all the more reprehensibly for the stealth employed.

[4] The purpose of the testing—prosecutorial or "administrative?" Following a trend developed in the lower courts over the last generation, the Supreme Court has allowed "administrative" or "special needs" exceptions to the "probable cause" and "warrant" requirements of the Fourth Amendment. In short, since positive drug test

results are supposedly "confidential" and not referred for prosecution—despite the fact that they constitute "scientific evidence" of recent criminal conduct—the Court majority finds them acceptable as mere non-discretionary and "evenhanded" administrative functions for which the probable-cause evaluating function of the magistrate is rendered unnecessary. In *Skinner v. Railway*, Justice Kennedy sings the praises of this curious nuance of evenhandedness, arguing that "arbitrary" would be his (hallucinatory) specter of magistrates abusing their power by opting to "arbitrarily" issue warrants without cause against targeted individuals. Better to trade in this type of speculative (and preposterous) arbitrariness for the operational evenhandedness of indiscriminate investigation. Consider for a moment, however, Justice O'Conner's dissenting rejoinder in the *Vernonia* high school drug testing case:

> Perhaps most telling of all, as reflected in the text of the Warrant Clause, the particular way the Framers chose to curb the abuses of general warrants—and by implication, all general searches—was not to impose a novel 'evenhandedness' requirement; it was to retain the individualized suspicion requirement contained in the typical general warrant, but to make that requirement meaningful and enforceable, for instance, by raising the required level of individualized suspicion to objective probable cause . . . While the plain language of the Amendment does not mandate individualized suspicion as a necessary component of all searches and seizures, the historical record demonstrates that the Framers believed that individualized suspicion was an inherent quality of reasonable searches and seizures . . . Protection of privacy, not evenhandedness, was then and is now the touchstone of the Fourth Amendment.

Lest anyone think that such Fourth Amendment fastidiousness is the exclusive preserve of the more "liberal" drug-war-softie minority on the Court, conservative Justice Scalia's *Von Raab* dissent is illuminating:

> I decline to join the Court's opinion in the present case because neither the frequency of use nor connection to harm is demonstrated or even likely. In my view the Customs Service rules are a kind of immolation of privacy and human dignity in symbolic opposition to drug use . . . What better way to show that the Government is serious about its 'war on drugs' than to subject its employees on the front line of that war to this invasion of their privacy and affront to their dignity? To be sure, there is only a slight chance that it will prevent some serious public harm resulting from Service employee drug use, but it will show to the world that the Service is 'clean,' and—most important of all—will demonstrate the determination of the Government to eliminate this scourge of our society. I think that this justification is unacceptable: that the impairment of individual liberties cannot be the means of making a point; that symbolism, even symbolism for so worthy a cause as the abolition of unlawful drugs, cannot validate an otherwise unreasonable search . . . Those who lose because of the lack of understanding that begot the present exercise in symbolism are not just the Customs Service employees, whose dignity is thus offended, but all of us—who suffer a coarsening of our national manners that ultimately give the Fourth Amendment its content, and who become subject to the administration of federal officials whose respect for our privacy can hardly be greater than the small respect they have been taught to have for their own.[98]

"There is no Constitution at Disneyland; we have our own laws here."

We seem to be in some ways reverting to a feudal society. Well-heeled gated communities sometimes sue for property tax exemption on the grounds that they provide their own "municipal services," including armed security patrols. Similarly, large corporations frequently field their own internal security operations and deal

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[98] U. S. Supreme Court, *Treasury Employees v. Von Raab*, 489 U.S. 656 (1989).

with suspected transgressors with methods that many feel trample on constitutional rights.[99]

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[99] An excerpt from a recent article on corporate neo-feudalism:

Was Democracy Just a Moment? by Robert D. Kaplan

Of the world's hundred largest economies, fifty-one are not countries but corporations. While the 200 largest corporations employ less than three fourths of one percent of the world's work force, they account for 28 percent of world economic activity. The 500 largest corporations account for 70 percent of world trade. Corporations are like the feudal domains that evolved into nation-states; they are nothing less than the vanguard of a new Darwinian organization of politics . . .

. . . The number of residential communities with defended perimeters that have been built by corporations went from 1,000 in the early 1960s to more than 80,000 by the mid-1980s, with continued dramatic increases in the 1990s. ("Gated communities" are not an American invention. They are an import from Latin America, where deep social divisions in places like Rio de Janeiro and Mexico City make them necessary for the middle class.) Then there are malls, with their own rules and security forces, as opposed to public streets; private health clubs as opposed to public playgrounds; incorporated suburbs with strict zoning; and other mundane aspects of daily existence in which—perhaps without realizing it, because the changes have been so gradual—we opt out of the public sphere and the "social contract" for the sake of a protected setting. Dennis Judd, an urban-affairs expert at the University of Missouri at St. Louis, told me recently, "It's nonsense to think that Americans are individualists. Deep down we are a nation of herd animals: micelike conformists who will lay at our doorstep many of our rights if someone tells us that we won't have to worry about crime and our property values are secure. We have always put up with restrictions inside a corporation which we would never put up with in the public sphere. But what many do not realize is that life within some sort of corporation is what the future will increasingly be about." . . .

. . . "The government of man will be replaced by the administration of things," the Enlightenment French philosopher Henri de Saint-Simon prophesied. We should worry that experts will channel our very instincts and thereby control them to some extent. For example, while the government fights drug abuse, often with pathetic results, pharmaceutical corporations have worked through the government and political parties to receive sanction for drugs such as stimulants and anti-depressants, whose consciousness-altering effects, it could be argued, are as great as those of outlawed drugs . . . .

. . . Even J. P. Morgan was limited by the borders of the nation-state. But in the future who, or what, will limit the likes of Disney chairman Michael Eisner? The UN? Eisner and those like him are not just representatives of the "free" market. Neither the Founders nor any of the early modern philosophers ever envisioned that

The above-cited Disney quote appeared in the press on November 4, 1996 in a story concerning allegedly excessive security practices at Disneyland.[100] The remark was reportedly made by a Disney security supervisor to the mother of a young Disneyland employee who had been detained by Security and held incommunicado for several hours after she neglected to turn in her uniform after leaving her job at an ice cream shop on the premises. The news item also recounted additional episodes wherein guests suspected of shoplifting were similarly detained and subjected to prolonged interrogation and intense pressure to confess, sign releases, and pay summary "civil damages" on the spot as a condition of release from "custody." Earlier last fall, similar stories appeared in central Florida papers regarding the same types of security practices at Disney World in Orlando. Critics complained that Disney, owing to its enormous economic clout in the area,

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the free market would lead to the concentration of power and resources that many corporate executives already embody. Whereas the liberal mistake is to think that there is a program or policy to alleviate every problem in the world, the conservative flaw is to be vigilant against concentrations of power in government only—not in the private sector, where power can be wielded more secretly and sometimes more dangerously.

Umpire Regimes

This rise of corporate power occurs more readily as the masses become more indifferent and the elite less accountable. Material possessions not only focus people toward private and away from communal life but also encourage docility. The more possessions one has, the more compromises one will make to protect them. The ancient Greeks said that the slave is someone who is intent on filling his belly, which can also mean someone who is intent on safeguarding his possessions. Aristophanes and Euripides, the late-eighteenth-century Scottish philosopher Adam Ferguson, and Tocqueville in the nineteenth century all warned that material prosperity would breed servility and withdrawal, turning people into, in Tocqueville's words, "industrious sheep." Robert D. Kaplan, Atlantic Monthly, December 1997, pp. 55-80.

[100] e.g., Associated Press wire story, Las Vegas Review-Journal, p. 4B.

effectively operated a private extrajudicial fiefdom, with the off-the-record assent of a local law enforcement establishment quite content to let Disney administer its own brand of "justice" for the mostly petty offenses the park encountered, thereby lightening the load on the overburdened police.

Are we to understand that we leave our Constitutional rights at the entrance to the mall and the factory gate? That once we pass through the turnstile at the theme park or the door of the corporate office, we leave our citizenship and our Bill of Rights behind and are accorded in return mere virtual green cards or visas revocable at the whim of the proprietors? That what we need is an Ambassador to Disney? The construction of consulates within our corporate enclaves, Gallerias, and gated communities?

That to get and keep a job (obtain a driver's license? rent an apartment?) we must partake of the drug war Holy Communion—its chalice the Pyrex beaker; its confessional the secured bathroom stall; its Keeper of the Sacred Writ William J. Bennett; its papal Grand Inquisitor Gerald B.H. Solomon?

Obsta principiis

Writing for the 8-1 majority in the recent *Chandler v. Miller* decision (Docket 96-126), Justice Ginsberg once again reinforces the notion that private sector privacy violations are outside the scope of the Fourth Amendment, opining that "we do not speak to drug testing in the private sector, a domain unguarded by Fourth Amendment constraints. See *United States v. Jacobsen*, 466 U.S. 109, 113 (1984)."

In the most general and mundane sense, it is indeed the case that private sector privacy violations are tort issues, not constitutional ones. If, for example, Penthouse Magazine surreptitiously acquires and publishes, say, *in flagrante delicto* photographs of a celebrity and his or her consort, Mr. Guccione's attorneys will not find themselves defending at Orals before the Supreme Court. This type of violation and similar invasion of privacy and "misappropriation of likeness" offenses are in fact civil tort issues.

But, such intrusions are far removed in character and intent from those posed by suspicionless private sector drug screens. And, if we follow closely the chain of precedents back in time from *Chandler*, we are perplexed to learn that there isn't much "there" there, in terms of arguments and principles that validate indiscriminate commercial workplace drug testing. Moreover, the emphatic and repeated Court apology that drug test results are purely "administrative" and not "prosecutorial" is shown by these precedents to be unnecessary—private employers could indeed forward positive drug test results to the authorities for prosecution, for such could be construed from several of these cases as also tantamount to the ostensibly narrow and long-recognized "plain view" exception to the probable cause and search warrant requirements of the Fourth Amendment.

The *Chandler* "stare decisis" chronology is as follows:

- *United States v. Jacobsen*, 466 U.S. 109 (1984). FedEx employees encounter what turns out to be cocaine spewing from a damaged package and alert the authorities. Suppression of the evidence denied: "Plain View" equivalence.

- *Walter v. United States*, 447 U.S. 649 (1980). Oops! 8mm porno films sent to the wrong address. Inadvertent recipients alert the authorities. Suppression of the evidence denied: "Plain View" equivalence.

- *Burdeau v. McDowell*, 256 U.S. 465 (1921). Private party theft of documents subsequently used as evidence in a mail fraud case. Suppression of the evidence denied: "Plain View" equivalence. This case cites seven prior decisions in summary justification of the public/private distinction:

> We do not question the authority of the court to control the disposition of the papers, and come directly to the contention that the constitutional rights of the petitioner were violated by their seizure, and that having subsequently come into the possession of the prosecuting officers of the government, he was entitled to their return. The amendments involved are the Fourth and Fifth, protecting a citizen against unreasonable searches and seizures and compulsory testimony against himself. An extended consideration of the origin and purposes of these amendments would be superfluous in view of the fact that this court has had occasion to deal with those subjects in a series of cases. *Boyd v. United States*, 116 U.S. 616, 6 Sup. Ct. 524; *Adams v. New York*, 192 U.S. 585, 24 Sup. Ct. 372; *Weeks v. United States*, 232 U.S. 383, 34 Sup. Ct. 341, L. R. A. 1915B, 834, Ann. Cas. 1915C, 1177; *Johnson v. United States*, 228 U.S. 457, 33 Sup. Ct. 572, 47 L. R. A. (N. S.) 263; *Perlman v. United States*, 247 U.S. 7, 38 Sup. Ct. 417; *Silverthorne Lumber Co. v. United States*, 251 U.S. 385, 40 Sup. Ct.182; *Gouled v. United States*, decided February 28th, 255 U.S. 298, 41 Sup. Ct. 261, this term.
>
> The Fourth Amendment gives protection against unlawful searches and seizures, and as shown in the previous cases, its protection applies to governmental action. Its origin and history clearly show that it was intended as a restraint upon the activities of sovereign authority, and was not intended to be a limitation upon other than

> governmental agencies; as against such authority it was the purpose of the Fourth Amendment to secure the citizen in the right of unmolested occupation of his dwelling and the possession of his property, subject to the right of seizure by process duly issued.
>
> In the present case the record clearly shows that no official of the federal government had anything to do with the wrongful seizure of the petitioner's property, or any knowledge thereof until several months after the property had been taken from him and was in the possession of the Cities Service Company. It is manifest that there was no invasion of the security afforded by the Fourth Amendment against unreasonable search and seizure, as whatever wrong was done was the act of individuals in taking the property of another. A portion of the property so taken and held was turned over to the prosecuting officers of the federal government. We assume that petitioner has an unquestionable right of redress against those who illegally and wrongfully took his private property under the circumstances herein disclosed, but with such remedies we are not now concerned."

In other words, you can sue a private transgressor for civil damages, but it's not a constitutional issue—even if the private intrusion effects your prosecution by the government. Moving along to the cases cited in *Burdeau*:

- *Gouled v. United States*, 255 U.S. 298 (1921). Evidence of criminal fraud obtained by ruse. An Army Intelligence Department operative made an ostensible "social call" on the defendant, whereupon the operative gained access to and removed certain incriminating papers. The Court ruled that the evidence was obtained illegally.

- *Silverthorne Lumber Co. Inc, et al. v. United States*, 251 U.S. 385 (1920). Evidence obtained without a warrant subsequent to corporate defendant's refusal to obey a subpoena. Lower court conviction overturned.

- *Perlman v. United States*, 247 U.S. 7 (1918). Documents originally intended for use in a civil patent infringement suit subsequently used in a grand jury proceeding. The Court ruled here that the government could indeed use the evidence.

- *Weeks v. United States*, 232 U.S. 383 (1914). Warrantless search for evidence of illegal gambling activity, in the course of which authorities gained entry to the suspect's home through the aid of a neighbor who informed them of the location of a house key. The Court ruled the search unconstitutional. Importantly, this case is the first of the Chandler precedents to explicitly point out the original intent of the Fourth Amendment, citing the history of General Warrants and Writs of Assistance:

> The history of this Amendment is given with particularity in the opinion of Mr. Justice Bradley, speaking for [232 U.S. 383, 390] the court in *Boyd v. United States*, 116 U.S. 616, 29 L. ed. 746, 6 Sup. Ct. Rep. 524. As was there shown, it took its origin in the determination of the framers of the Amendments to the Federal Constitution to provide for that instrument a Bill of Rights, securing to the American people, among other things, those safeguards which had grown up in England to protect the people from unreasonable searches and seizures, such as were permitted under the general warrants issued under authority of the government, by which there had been invasions of the home and privacy of the citizens, and the seizure of their private papers in support of charges, real or imaginary, make against them. Such practices had also received sanction under warrants and seizures under the so-called writs of assistance, issued in the American colonies. See *2 Watson*, Const. 1414 et seq. Resistance to these practices had established the principle which was enacted into the fundamental law in the 4th Amendment, that a man's house was his castle, and not to be invaded by any general authority to search and seize his goods and papers. Judge Cooley, in his *Constitutional Limitations*, pp. 425, 426, in treating of this feature of our Constitution said: 'The maxim that 'every man's house is his castle' is made a part of our constitutional law in the clauses prohibiting unreasonable searches and seizures, and has always been looked upon

> as of high value to the citizen.' 'Accordingly,' says Lieber in his work on *Civil Liberty and Self-Government*, 62, in speaking of the English law in this respect, 'no man's house can be forcibly opened, or he or his goods be carried away after it has thus been forced, except in cases of felony: and then the sheriff must be furnished with a warrant, and take great care lest he commit a trespass. This principle is jealously insisted upon.' In *Ex parte Jackson*, 96 U.S. 727, 733, 24 S. L. ed. 877, 879, this court recognized the principle of protection as applicable to letters and sealed packages in the mail, and held that, consistently [232 U.S. 383, 391] with this guaranty of the right of the people to be secure in their papers against unreasonable searches and seizures, such matter could only be opened and examined upon warrants issued on oath or affirmation, particularly describing the thing to be seized, 'as is required when papers are subjected to search in one's own household.'

- *Johnson v. United States*, 228 U.S. 457 (1913). Can evidence gleaned from a civil bankruptcy proceeding subsequently be used in a fraud case? Yes, said the Court. Such does not constitute "unreasonable search and seizure" and "compelled testimony" in violation of the Fourth and Fifth Amendments.

- *Adams v. New York*, 192 U.S. 585 (1904). Warrantless acquisition of illegal gambling "policy slips." The Court ruled here that evidence obtained by a "trespasser" could indeed be used against the defendant, that the defendant had tort remedies available with respect to the "trespass" but that the intruder's "testimony is not thereby rendered incompetent." Interestingly, this decision contradicts *Weeks*.

- *Boyd v. United States*, 116 U.S. 616 (1886). The watershed decision in Ginsberg's stare decisis "4th-does-not-apply" genealogy. *Boyd* was about allegations of Customs Revenue Law fraud against a glass products importer. Does the subpoenaed production of invoices constitute unconstitutional "compelled self-

incrimination"? The Court ruled in this case that, yes it does. Lower court reversed.

Unhappily for those claiming "4th-does-not-apply-to-the-private-sector," these precedents are not uniformly instructive, supportive, or relevant to the public/private issues surrounding mass drug screening. Moreover, the antecedent *Boyd* case in particular seems to throw cold water on the idea of legitimated extrajudicial expediency of the sort typified by suspicionless private sector drug testing:

> Though the proceeding in question is devested (sic) of many of the aggravating incidents of actual search and seizure, yet, as before said, it contains their substance and essence, and effects their substantial purpose. It may be that it is the obnoxious thing in its mildest and least repulsive form; but illegitimate and unconstitutional practices get their first footing in that way, namely: by silent approaches and slight deviations from legal modes of procedure. This can only be obviated by adhering to the rule that constitutional provisions for the security of person and property should be liberally construed. A close and literal construction deprives them of half their efficacy and leads to gradual depreciation of the right, as if it consisted more in sound than in substance. It is the duty of courts to be watchful for the constitutional rights of the citizen, and against any stealthy encroachments thereon. Their motto should be *obsta principiis.*

And *obsta principiis* is directly relevant to the argument of this thesis, for suspicionless drug testing policy is nothing less than a Constitutionally-repudiated resurrection of *clamorem et uthesium* that tramples on legitimate privacy rights forged in a noble and costly revolt against tyranny. It is a policy that "strict constructionists" ought rush to repudiate, one undeniably repugnant to Constitutional and ethical principle. Political "conservatives" vowing to enact

policies that at once "work" and hew to "original intent" ought give the matter more serious thought than they have to date.

The devolution of constitutional privacy

In a 1991 American Business Law Journal article, legal scholar Don Mayer argues that the major drug testing cases have served a central role in the devaluation the original meaning of "privacy" under the Fourth Amendment. Mayer notes that in Fourth Amendment criminal cases generally, "the Court has generally found individual expectations unreasonable, and in civil cases has generally discarded both probable cause and warrant requirements" and that " the Court's contractarian thinking encourages the notion that not only statutory but constitutional rights can be explicitly or implicitly waived by the demands of employers or the 'operational realities of the workplace'."[101]

Mayer observes that what was once a constitutional "right" has been downgraded to a mere "interest" in competition with other, more powerful interests: an individual interest whose worth must be calculated on the basis of "reasonable expectations." What are "reasonable expectations"? Well, whatever society is prepared to accept as "reasonable," a notion with a charmingly bootstrap quality where drug testing cases are concerned. For example, Mayer cites *Willner v. Thornburgh* (928 F.2d 1185, D.C. Cir. 1991), wherein the majority wrote that

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[101] Don Mayer, *Workplace Privacy and the Fourth Amendment: An End to Reasonable Expectations?* American Business Law Journal, Vol. 29, 1991, p.631.

> [m]ore than 85 percent of employers with drug-testing programs tested job applicants . . . Some of the nation's largest employers, including American Telephone & Telegraph, DuPont, Exxon, Federal Express, Trans World Airlines, and United Airlines . . . What is occurring generally outside government is some indication of what expectations of privacy "society is prepared to accept as reasonable" when the government engages in the hiring process.[102]

So, the very fact that private sector corporations, "unguarded" by the Fourth Amendment (recall Ginsberg earlier in *Chandler*), screen for illegal drugs willy-nilly without cause becomes itself the reference standard for "reasonable expectations" under the Fourth Amendment. How conveniently circular.

In essence, on this line of reasoning, the scope of the Fourth Amendment is determined by Disney and its corporate brethren, not by the courts. Whatever is required to meet the "operational realities of the workplace" trumps, by virtue of its mere declaration and enactment, an employee's puny privacy "interest."

Mayer's article is thorough and thoughtful, a highly recommended resource, but on one significant point he errs:

> The fourth amendment was not written with modern conditions in mind. Electronic searching methods through wiretapping, computers, parabolic microphones, or laser and computer assisted microphones that can literally listen through walls were unknown and unimagined in 1789. Also unknown were biochemical analyses of human hair or waste products, genetic and personality testing, voice-stress analyzers, infra-red and starlight telescopes, and telephoto lenses. Any fourth amendment jurisprudence based on the framers' intent is therefore likely to look backwards and thus limit the amendment's relevance to modern conditions.[103]

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[102] Mayer, op cit., p. 650.

[103] Mayer, op cit., p. 633.

I counter that increasing technological sophistication in no way limits the relevance of the original intent and meaning of the Fourth Amendment. If anything, the history so exhaustively recounted by Cuddihy is more relevant than ever. *clamorem et uthesium*, be it operationalized through the warrantless breaking down of doors, through mass-production bioassay, or through the indiscriminate use of a breadth of high-tech surveillance devices by employers in pursuit of contraband, clearly remains nothing more than Constitutionally-repudiated tactical expediency. Recall from *Burdeau*:

> The Fourth Amendment gives protection against unlawful searches and seizures, and as shown in the previous cases, its protection applies to governmental action. Its origin and history clearly show that it was intended as a restraint upon the activities of sovereign authority, and was not intended to be a limitation upon other than governmental agencies; as against such authority it was the purpose of the Fourth Amendment to secure the citizen in the right of unmolested occupation of his dwelling and the possession of his property, subject to the right of seizure by process duly issued.

In light of Cuddihy (which, of course, the 1921 Court did not have available), one has to conclude that *Burdeau* was simply in error on this point. Yes the Fourth Amendment is a brake on the activities of the sovereign. It was also, remember, originally intended to restrain those acting as the *agents* of the sovereign, and the suspicionless private sector drug test is indisputably an enforcement tool of commercial and institutional agents of the contemporary sovereign.

The observations of John Stuart Mill (On Liberty, Chapter 1) come to mind:

> Like other tyrannies, the tyranny of the majority was at first, and is still vulgarly, held in dread, chiefly as operating through the acts of the public authorities. But reflecting persons perceived that when

> society is itself the tyrant—society collectively, over the separate individuals who compose it—its means of tyrannizing are not restricted to the acts which it may do by the hands of its political functionaries. Society can and does execute its own mandates: and if it issues wrong mandates instead of right, or any mandates at all in things with which it ought not to meddle, it practises a social tyranny more formidable than many kinds of political oppression, since, though not usually upheld by such extreme penalties, it leaves fewer means of escape, penetrating much more deeply into the details of life, and enslaving the soul itself. Protection, therefore, against the tyranny of the magistrate is not enough; there needs protection also against the tyranny of the prevailing opinion and feeling; against the tendency of society to impose, by other means than civil penalties, its own ideas and practices as rules of conduct on those who dissent from them; to fetter the development, and, if possible, prevent the formation, of any individuality not in harmony with its ways, and compel all characters to fashion themselves upon the model of its own. There is a limit to the legitimate interference of collective opinion with individual independence; and to find that limit, and maintain it against encroachment, is as indispensable to a good condition of human affairs, as protection against political despotism.[104]

Indeed, James Madison and his co-founders of the new American nation quickly learned that continued exercise of the rights and freedoms they risked their lives for would require a vigilance codified into constitutional constraints focused on far more than any anticipated excesses of a neo-monarchical executive. As recounted by Stanford University constitutional historian Jack Rakove:

> Americans entered the Revolutionary crisis confident that they knew what their rights were; after independence, they modified these ideas only modestly. What did evolve, far more dramatically and creatively, were their ideas of where the dangers to rights lay and of how rights were to be protected. At the outset Americans believed that arbitrary acts of the Crown and its colonial officials, including judges of the higher courts, posed the greatest threat, and they accordingly treated the rights of representation and trial by jury as their chief securities against arbitrary rule. It took a decade of

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[104] John Stuart Mill, On Liberty and other writings, Stefan Collini, Ed., (Cambridge, UK, Cambridge University Press, 1989), pp. 7-8.

> experience under the state constitutions to expose the triple danger that so alarmed Madison in 1787: first, that the abuse of legislative power was more ominous than arbitrary acts of the executive; second, that the true problem of rights was less to protect the ruled from their rulers than to defend minorities against factitious popular majorities acting through government; and third, that agencies of central government were less dangerous than state and local despotisms.[105]

The drive to require mass suspicionless drug testing is nothing less than the work of "factitious popular majorities" acting through and at the behest of abusers of legislative power, justifying themselves through opinion polls purporting to demonstrate widespread public support for a policy that is plainly unconstitutional (as if Constitutional rights were subject to abrogation subsequent to the USA Today/CNN/CASA plebiscite *du jour*), a false public/private jurisprudential dichotomy clearly contradicted by the historical record, a dichotomy long-ago obliterated by politically cross-pollinated, self-interested parties. Madison and Jefferson would not be amused at the sullying of their moral enterprise.

The moral underpinnings of constitutional rights

The Framers' "moral enterprise"? Can we document that the founding of the new American nation was fueled by more than expedient, utilitarian considerations? That our Constitution is more than an inadequately detailed insurance contract or chess rulebook?

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[105] Jack N. Rakove, Original Meanings: politics and ideas in the making of the Constitution, (Alfred A. Knopf, NY, 1996) pp. 289-290.

Recall the assertion proffered in the introduction of this thesis: "Those who framed our Bill of Rights were far more noble than a cynical conspiracy of tariff-averse fur traders and rum-runners motivated by nothing more than a desire to hog-tie authority." Support for this view is seen in Graham Walker's Moral foundations of constitutional thought:

> Indeed, when the founding generation was framing and ratifying the Constitution, they did not seem to regard their undertaking as simply an assertion of their wills. If we take seriously their overtly moral arguments—and there is no compelling reason not to—we find that they did not imagine themselves to be arbitrarily privileging the conventional wants, and fears of their particular moment in history. Nor, conversely, did they seem to think they were providing a malleable rationale for the indeterminately evolving values of later generations. Rather, they defended their constitutional project as reaching to timeless principles of human nature and political order; for that reason they spoke of its universal significance.[106]

While Madison and his colleagues were indeed a practical, empirical, and politically-savvy lot, their erudition with respect to a normative heritage spanning the millennia from Athens through the Enlightenment armed them with the intellectual tools and ethical inclination for moral statecraft. Pitting "faction against faction," while no doubt tactically deft, had a higher normative basis and moral purpose:

> The separation between judicial, legislative, and executive power figures as part of a broader constitutional strategy to achieve both "responsibility" and "energy" in government by, among other things, fragmenting political power. The federal separation among states and between state and national authority also embodies this fragmentation. Madison noted that this fragmentation would not be

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[106] Graham Walker, Moral foundations of constitutional thought: current problems, Augustinian prospects, (Princeton, NJ, Princeton University Press, 1990), pp. 10-11.

> necessary "if men were angels." But his "reflections on human nature" led him to argue that constitutional fragmentation of power would foster justice by checking ambition with ambition. His argument thus suggests the normative underpinnings of at least a portion of those structural provisions of the Constitution . . . as implicitly rather than explicitly moral in character.
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> Augustine exposes the fundamental ontological terms on which we can make sense of Madison's argument. He thus equips us to reaffirm it.[107]

Walker's intent is to demonstrate how "the normative impasses of contemporary constitutional theory invite an Augustinian scrutiny"[108] that might provide a proper understanding of the moral heritage of procedural, positivist law. He finds fault with those who would deny the relationship:

> Every influential scheme of constitutional theory stands, whether openly or not, on some premises of normative morality. Yet most contemporary constitutional scholars—on both the political Left and Right—are unwilling to shoulder the normative burdens of their own enterprise. Instead they profess to believe that morality is arbitrary and relative at its foundations . . .
>
> Some constitutional theorists contend, for example, that the constitutional prerogatives of democratic majorities ought to be recognized as paramount and ought to be largely exempt from judicial scrutiny. Other devote themselves to arguing that certain fundamental constitutional rights ought to be protected from those same majorities.[109]

Indeed, the record is clear that we can count Jefferson and Madison—the principal architects of the U.S. Constitution—in the latter camp. Contemporary

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[107] Walker, op cit., p. 160.

[108] Walker, op cit., p 23.

[109] Walker, op cit., pp. 10-11.

history makes it clear also that we can count Chief Justice Rehnquist—who has yet to encounter a drug testing program he ought strike down—and Judge Bork—who has yet to come upon a Constitutional privacy claim he might affirm—in the former:

> Chief Justice Rehnquist and former federal judge Robert Bork share a common constitutional philosophy. As expressed in their most theoretically self-conscious essays, this philosophy rests on two basic pillars: a moral nihilism that reduces morality to convention, and a political theory that reduces legitimacy to the will of democratic majorities. Bork has asserted unequivocally that morality is never anything more than a "form of gratification" that people indulge, while Rehnquist has insisted that distinctions between right and wrong are radically subjective preferences, beyond the reach of reason. Hence there exists nothing beyond majority will itself, they argue, that can rightfully bar the majority from establishing, with public force, whichever gratifications or preferences it wills to establish. In other words, Rehnquist and Bork connect the two pillars of their theory by making majority will their conventional surrogate for a real morality. They seek to erect on this foundation a normative theory of interpretation (framers' intent) and of adjudication (judicial restraint).[110]

We *know*, however, from the ample historical record what the Framers' intent was with respect to suspicionless searches—an intent made clear by both the plain text and the developmental context of the Fourth Amendment. A proper hewing to "judicial restraint" in such matters, consequently, ought oblige the Court to eschew the ungainly spectacle of expedient "administrative exceptions" departures from constitutional privacy principle codified therein. In Chapter 5 we examine a breadth of evidence speaking to the importance of privacy as a human necessity and a moral good. Suffice it to observe here that a jurisprudential and political respect for

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[110] Walker, op cit., p. 14.

privacy can be viewed in the context of an Augustinian humility necessary for the effective long-term functioning of a democracy. Walker argues that

> [T]he Augustinian attitude thus has doubts not about the existence of an ultimate, supralegal moral goodness but about the possibilities of its embodiment in human law. It has doubts not about the basic and primary content of the good but about the human ability to discover and respect its political and legal entailments.
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> The imperative of Augustinian caution thus applies with special force to anyone wielding the instruments of political order. Indeed, it supplies a compelling justification for an American constitutional system that fragments both the power to define good and the power to do it.[111]

Examples of "Augustinian caution" abound in St. Augustine's City of God:

> What shall I say of these judgments which men pronounce on men, and which are necessary in communities, whatever outward peace they enjoy? Melancholy and lamentable judgments they are, since the judges are men who cannot discern the consciences of those at their bar, and are therefore frequently compelled to put innocent witnesses to the torture to ascertain the truth regarding the crimes of other men. What shall I say of torture applied to the accused himself? He is tortured to discover whether he is guilty, so that, though innocent, he suffers most undoubted punishment for crime that is still doubtful, not because it is proved that he committed it, but because it is not ascertained that he did not commit it. Thus the ignorance of the judge frequently involves an innocent person in suffering.[112]
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> . . . But, as man has a rational soul, he subordinates all this which he has in common with the beasts to the peace of his rational soul, that his intellect may have free play and may regulate his actions, and that he may thus enjoy the well-ordered harmony of knowledge and action which constitutes, as we have said, the peace of the rational soul. And for this purpose he must desire to be neither molested by pain, nor disturbed by desire, nor extinguished by death, that he may

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[111] Walker, op cit., p. 150.

[112] St. Augustine, *Of the error of human judgments when the truth is hidden*, Book XIX, Ch. 6, City of God, [http://www.bluffton.edu/~schlabachg/docs/city.htm], March, 1998.

> arrive at some useful knowledge by which he may regulate his life and manners. But, owing to the liability of the human mind to fall into mistakes, this very pursuit of knowledge may be a snare to him unless he has a divine Master, whom he may obey without misgiving, and who may at the same time give him such help as to preserve his own freedom. And because, so long as he is in this mortal body, he is a stranger to God, he walks by faith . . .
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> . . . But in the family of the just man who lives by faith and is as yet a pilgrim journeying on to the celestial city, even those who rule serve those whom they seem to command; for they rule not from a love of power, but from a sense of the duty they owe to others—not because they are proud of authority, but because they love mercy.[113]

There is little that can be characterized as circumspect or "merciful" in the espoused views and policy proposals of our leading anti-drug partisans such as Congressman Solomon and Dr. William Bennett, however. Recall that for Dr. Bennett and his supporters (Chapter 1) the power of "authority" over the individual is beyond dispute or diminution, and those who choose to disobey authority by indulging in illicit drug use are fair game for the harshest of sanctions.

Peter Huber's call for more *clamorem et uthesium:* Back to the future

In his columns for Forbes Magazine, Peter Huber inexplicably sings the praises of a return to the Hue and Cry, this time in the form of private commercial digital pursuit of malefactors, deadbeats, and all manner of miscreants. Some excerpts:

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[113] St. Augustine, op cit., *Of the order and law which obtain in heaven and earth, whereby it comes to pass that human society is served by those who rule it,* Ch. 14.

Crime and Punishment

by Peter Huber, Forbes, November 20, 1995 at Pg. 210.

. . . The private system of law and order is gaining power as fast as our desktop computers and communications networks. Wherever you deal with people today, you leave a trail of economic evidence. With every new modem and Web site, merchants, employers, landlords and customers pool their experience about whom to trust and whom not to. In the economic world, we've privatized both the trial and the punishment. No preening trial lawyers, muddle-headed judges, or sociopathic juries, nothing but private databases and telephone lines.

Catching the criminal in the first place used to depend on private initiative, too. Under the ancient English law of "hue and cry," all who heard their neighbor shouting that a felon was at large were bound to join in the pursuit until the malefactor was taken. Failure to take part in the pursuit was itself a crime. Today the hue and cry is electronic, and not just the village but the whole nation can be alerted to the chase. Except that honest burghers don't chase any more, they walk away.

It isn't just a matter of self-interest: shunning crooks and psychopaths is a civic duty, as important as paying taxes to maintain prisons. Most honest people know that, and willingly add to the flow of accurate information about how their fellow citizens behave in public dealings. It's like chatting with your neighbor about a prowler; we don't do it for profit, we do it for mutual protection.

No new list of rights minted in Washington can possibly stop or change this. There is nothing illegal about hounding known psychopaths off the golf greens and onto the roughs of civilization. To the contrary: Hounding of this sort is an obligation we owe each other. Civil society has always depended on its ability to build trust and punish treachery. The private instruments that analyze, record and describe that trail to others aren't subject to the constitutional demands of due process that some judges push to dysfunctional extremes. The Bill of Rights doesn't apply to strictly private conduct. Yes, Congress has passed one or two fair credit reporting laws, but their demands are modest and easily bypassed.

Nor should we want to limit the information economy's privatization of law and order. As Frank Fukayama describes in his

> splendid new book, Trust, societies that develop cultures of cooperation prosper and flourish; others don't. The challenge is to extend trust beyond the traditional family unit or small tribe; the building of microchips, skyscrapers and jet planes requires cooperation on a larger scale. Trust used to depend on family, ethnicity, common nationality and physical proximity. It no longer does. Today trust is forged through electronic networks . . . [114]
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> The Computer That Doesn't Forget
>
> By Peter Huber, Forbes, August 12, 1996, at Pg. 144.
>
> . . . As Oliver North discovered to his sorrow, electronic files are quite different. He thought that erasing E-mail from his computer erased it from the face of the earth. It didn't. Computer networks log files in and out, catalog, track, back up and archive with meticulous precision. Electronic file managers faithfully record where records go, on whose instruction. They create records of records, layer upon layer. This isn't optional. If the machines don't do this, the network soon dies.
>
> That simple engineering fact has profound consequences for good management, and for privacy, too. Management by wire creates almost perfect accountability. How many scribbled notes did you write in the last year, and what did they say? How many orders did you bark out on the phone, and to whom? You could hardly begin to guess. Mrs. Clinton probably can't, either.
>
> But if your office uses computers at all seriously, your E-mail records are immaculate, even if you wish they weren't. Wiping information off a corporate network completely is very difficult. Wiping it off the Internet is impossible. Once the file goes out, you never get all the downstream copies back. It's like trying to take back the tune to "Happy Birthday." . . . [115]

One hesitates to take on such an august jurisprudential and intellectual eminence as Peter Huber, but with respect to these propositions he is simply wrong,

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[114] Peter Huber, *Crime and Punishment*, Forbes, November 20, 1995, [http://www.phuber.com/huber/forbes/112095.html], March, 1998.

[115] Peter Huber, *The Computer That Doesn't Forget*, Forbes, August 12, 1996, [http://www.phuber.com/huber/forbes/081296.html], March, 1998.

for the "privacy/confidentiality" issue is far more complex than a mere matter of unfettered contributions "to the flow of accurate information about each other." Try selling *that* ideal to the innumerable frustrated citizens dealing with unresponsive credit reporting agencies that continue to make egregious mistakes which frequently wreak exasperating havoc. Or to those caught up in the error-ridden labyrinths of dealings with the IRS, which, of its own admission makes millions of mistakes each year, some trivial, some downright catastrophic. Try selling the notion of "almost perfect accountability" to the innocent victims of apparitional mass child abuse witch-hunts that result in moral travesties like Wenatchee and McMartin Pre-School. Or to the hapless citizen in Florida that was last year targeted with an anonymous internet hate mail campaign falsely accusing him of being a pedophile, complete with the publishing of his home address.

Huber should know better. His two best-known books, Galileo's Revenge (of his authorship) and Phantom Risk (which he edited), are erudite and compelling exposes of a long and dismal litany of the recurrent public mass psychoses that so often end up in ludicrous litigation and counter-productive policies. While perhaps some muddle-headed "judges push to dysfunctional extremes" a variety of rights claims (although no one can argue that the right to privacy has faired particularly well at the bench in recent decades), had we access to accurate historical data on the cost/benefit ratios of Hue and Cry pursuits, we might well take pause and give our hard-won system of justice (through publicly administered due process and publicly defended rights) the moral respect it deserves.

Next (Chapter Six): beyond the "constitutional," can we make a more general moral case in defense of privacy? Yes.

CHAPTER SIX

On the value of privacy: a short historical and philosophical rumination

As alluded to elsewhere in this thesis, one of the most durably contentious of American Constitutional claims involves the right to privacy. If we are to establish a case for privacy as a fundamental ethical principle that the law ought reflect and administer with vigor, we ought examine a bit of its legal, sociological, and philosophical evolution. In Chapter Five we began by examining the historical evolution of search-and-seizure restraints that ultimately found their way into our Fourth Amendment, and we ended with a review of the convoluted, often contradictory U.S. Supreme Court case law history and constitutional interpretation theory that undergirds our current legal and political confusion over the role of privacy as it pertains to drug policy. We begin here with some general sociopolitical and legal theory reflections that serve as foundation for and transition into the larger philosophical concepts bearing on privacy discussed in the latter part of this chapter.

Some regard privacy as an inseparable aspect of personal autonomy requisite for the very notion of liberty we ostensibly revere as a cardinal element our social and legal order. Critics, on the other hand, either dismiss the notion of a general right to privacy out of hand, or assert that it is a relatively recent, weak, and "derivative"

declaration, one inherently inimical to and necessarily deferential to society's "right-to-know" in the interest of commercial efficiency, public safety, and criminal prosecution. Those holding this latter position view the quest for privacy as a reaction to increasing urbanization and advances in information processing technologies, that the inhabitants of earlier eras and non-industrial cultures had and have little concern with our notions of "privacy." Critics of the former persuasion who disavow the very notion of a general right to privacy under federal law find the concept adequately accounted for principally in terms of property rights. Libertarian advocate Murray N. Rothbard, for example, argues in The Ethics of Liberty that "there is no such thing as a right to privacy except the right to protect one's property from invasion." Rothbard holds that what some regard as an invasion of privacy is more correctly seen as a misappropriation of property, "not some vague and woolly invasion of a "right to privacy.""[116]

"The word 'privacy' appears nowhere in the Constitution"

This is a recurrent apology one sees sprinkled throughout the legal policy literature, an unhelpful rhetorical tic emblematic of our jurisprudential and philosophical confusion with respect to "privacy." The Oxford Companion to the Supreme Court of the United States notes that

> [A]lthough there may be widespread agreement that a decent society is one in which individuals possess significant control over the release of information about themselves, it is difficult to find much protection for such a right in the Constitution, at least as it has been interpreted

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[116] Murray N. Rothbard, The Ethics of Liberty, (Atlantic Highlands, NJ, Humanities Press, 1982), p. 122.

> by the Supreme Court. As Lucas Powe has written, "privacy has never done as well in the courts as in the legal journals."[117]

A discouraging observation, that one—for privacy's standing in the legal journals is mixed at best. A few representative examples from the voluminous privacy legal theory archives suffice to illustrate:

- *Privacy, Autonomy, and Consent*, Daniel R. Ortiz, Harvard Journal of Law & Public Policy, Vol 12., No. 1, pp. 91-97: "Privacy is a funny notion—not in the sense of being odd or unusual, but in the sense of being hilarious. The constitutional value itself derives from an oxymoron: substantive due process."

- *"Everyman"'s Fourth Amendment: Privacy or Mutual Trust Between Government and Citizen?*, Scott E. Sundby, Columbia Law Review, Vol. 94, No. 6, Oct. 1994, pp. 1751-1812: "The fact that it has become increasingly difficult to find a Walden Pond or "bee-loud glade" in today's world does not mean that privacy no longer has a role within the Fourth Amendment; indeed, it may support all the more an argument for a stronger Amendment to protect what enclaves of privacy are left. But this requires thinking of privacy in general, abstract terms, such that everyone, including the Court, would agree that "privacy" is a cherished principle. However, under the Court's current Fourth Amendment formulaic approach, privacy is not invoked as an overarching value but rather is used as a specific *fact* to assess whether and how the Fourth Amendment should apply to a given intrusion."

- *Constitutional Law: Fourth Amendment and the Right to Privacy*, John A. Wasowicz, Trial, November 1990, pp. 60-64: "But just what is the right of privacy? Where did it come from? The answer, of course, is the fourth amendment. But that amendment does not even contain the word 'privacy.' Furthermore, it is debatable whether the amendment was ever intended to reach so broadly as it does into so many parts of our lives."

- *The Right of Privacy*, Jed Rubenfeld, Harvard Law Review, Vol. 102. No. 4, Feb. 1989, pp. 737-807: "This article is about the constitutional right to privacy, a right that many believe has little to do with privacy and nothing to do with the Constitution . . . The effect of these developments has been to compel a new articulation—in the form of a right to privacy— . . . a right ot be let alone, if by

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[117] Sanford Levinson, *Privacy*, The Oxford Companion to the Supreme Court of the United States, (New York, Oxford University Press, Kermit L. Hall, Ed., 1992), p. 676.

'let alone' we understand the right not to have the course of one's life dictated by the state."

- *What Privacy Is Not*, Lilian R. BeVier, Harvard Journal of Law & Public Policy, Vol. 12, No. 1, pp.99-103: Lawyers and judges customarily use words to convey meanings that are wholly unexpected to laymen . . . Lawyers are accustomed to using "privacy" as a term of art also. We know that this word, used in the context of a legal or constitutional dispute, does not always mean what we thought it meant . . . "

- *Sunlight, Secrets, and Scarlet Letters: The Tension Between Privacy and Disclosure in Constitutional Law*, Seth F. Kreimer, University of Pennsylvania Law Review, Vol. 140, No. 1, Nov. 1991, pp. 1-143: "The tension between the attraction of sunlight and the fear of the scarlet letter reflects deep-seated conflicts in our intuitions. We know that the scarlet letter is a punishment not to be trifled with, and like Justice Brandeis, we consider "the right to be let alone" to be one of the prizes of civilization. Yet we also believe, as did Brandeis, that "[s]unlight is . . . the best of disinfectants." . . . [T]here is fuzziness regarding subjects (or environs) that call forth constitutional protection. It is easy enough to say that certain types of bodily functions, certain personal communications, and certain aspects of personal psyche, physiology, and physique are not, without the consent of the subject, topics of public conversation in polite society . . . Fourth Amendment doctrine has at times adopted the proposition that there are particular 'intimate activities that the Amendment is intended to shelter from government interference or surveillance." These intimations have been freely mixed with historical inquiries about 'expectations of privacy that society has long recognized as reasonable' and quasi-sociological analysis regarding the 'expectation of privacy . . . that society is prepared to recognize as reasonable.'"

Constitutional privacy disputes: a brief survey

Whatever the extremity of positions taken pro or con, it is generally agreed that privacy is difficult to define, at least for jurisprudential purposes. Conservative legal theorist and former Supreme Court nominee Robert Bork is remembered for, among other things, his exasperated retort "Privacy to do what, Senator?" in arguing his proposition that he could "find no generalized right to privacy in the Constitution" during his Senate confirmation hearings. In his essay *Neutral Principles and Some First Amendment Problems*, Judge Bork derides the landmark Supreme Court

"privacy" decision in *Griswold vs. Connecticut* (381 U.S. 479, 1965) as "unprincipled," specifically with respect to what he views as Justice Douglas' spurious creation of a new general right of privacy out of thin air:

> He called the First Amendment's penumbra a protection of "privacy" and then asserted that the other amendments create "zones of privacy" . . . [and] that these various "zones of privacy" created an independent right of privacy, a right not lying within the penumbra of any specific amendment. He did not disclose, however, how a series of specified rights combined to create a new and unspecified right.[118]

Justice Douglas had concluded that the amalgam of 1st, 3rd, 4th, 5th, and 9th Amendment proscriptions conferred a broad presumptive privacy right. For Judge Bork and jurists of similar views, however, each assertion of Constitutionally protected activity must be evaluated as to its particulars and whether they mesh with explicit textual provisions of the Bill of Rights. For Bork, the burden of proof is on each privacy claimant. And, such is indeed to some degree evident in the history of U.S. Supreme Court adjudication of major federal "privacy" cases:

- *Meyer v. Nebraska* (262 U.S. 390, 1923) —Teaching of the German language in private schools in Nebraska in contravention of state law. The statute was struck down.
- *Olmstead v. United States* (277 U.S. 438, 1928) —Use of warrantless wiretaps upheld.
- *Griswold v. Connecticut* (381 U.S. 479, 1965) —Invalidation of state laws forbidding the use of contraceptives.
- *Stanley v. Georgia* (394 U.S. 557, 1969) —Private possession of "obscene" materials held to be constitutionally protected.

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[118] Robert H. Bork, *Neutral Principles and Some First Amendment Problems*, The Normative Constitution, Sherlock et al, Ed., (Lanham, MD, Rowman & Littlefield Publishers, Inc., 1995), p. 21.

- *Roe v. Wade* (410 U.S. 113, 1973) —The landmark decision declaring abortion decisions to be a woman's private prerogative. Probably the most controversial privacy ruling in U.S. history.
- *Akron v. Akron Center for Reproductive Health* (462 U.S. 416, 1983) —Upheld Ohio restrictions on abortion services despite the precedent of Roe vs. Wade.
- *Thornburgh v. American College of Obstetricians & Gynecologists* (476 U.S. 747, 1986) —Upheld the "central holding" (i.e., a woman's right to reproductive autonomy) of Roe in striking down Pennsylvania abortion regulations.
- *Bower v. Hardwick* (478 U.S. 186, 1986) —Held in favor of a Georgia law forbidding private consensual homosexual "sodomy."
- *Skinner v. Railway Labor Executives Association* (489 U.S. 602, 1989) — Validated mandatory post-accident warrantless drug testing of railroad employees.
- *National Treasury employees Union v. Von Raab* (489 U.S. 656, 1989) —Upheld suspicionless pre-employment drug testing of Treasury Department applicants for "sensitive" positions.
- *Vernonia School District 47J v. Acton et ux* (Docket 94-590, 1995) —Ruled that Oregon schools have the right to randomly test student athletes for drug use.

The foregoing comprise a mixed bag of particulars providing the grist for privacy affirmations and denials: wiretaps, private school curricula, heterosexual relations, homosexual relations, abortion, possession of "obscenity," and warrantless drug testing of various classes of citizens. While it is apparent that litigated privacy issues have primarily been and will likely continue to be decided fairly narrowly with a focus on their case-specific attributes—particularly during the conservative Rehnquist Court era—it is difficult to see the textual bases for much of the foregoing. While the word "privacy" admittedly appears nowhere in the text of the Bill of Rights, neither do the terms "obscenity," "sodomy," "pregnancy," "sacred marital bedroom," or "drug abuse." Those who espouse a view of the Constitution as

a document of broad moral principles find such lack of specificity compelling in their argument against simplistically limited textual "strict construction."[119] Indeed, the 9th Amendment—"The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people"—is universally cited by "broad construction" advocates to counter the observation that the specific term "privacy" is absent from the Constitutional language. To the "Constitution-of-Principle" advocate, the very brevity and generality of the Constitutional text is dispositive evidence that, far from being a document essentially no different than a commercial insurance contract, the "large-C" Constitution provides the general vision of justice and procedural guidelines for those who must administer ongoing the "small-c" constitution comprised of the very breadth of our social fabric.

A final word on "textualism": In recent speeches and writings, Justice Antonin Scalia has taken pains to expound on the difference between "originalism" and "textualism," planting himself squarely in the latter camp. Considered by many the intellectual leader of the Rehnquist Court, Scalia has grown weary of the insurmountable problems associated with searching for the original intent behind constitutional clauses asserted to apply to issues brought before the judiciary. Such

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[119] A different take on Constitutional "text": In a forceful dissent in *Skinner vs. Railway*, Justices Marshall and Brennan chide the majority for "jettisoning" the 4th Amendment in favor of drug war policy expediency, observing that "[T]he majority's concern with the railroad safety problems caused by drug and alcohol abuse is laudable; its cavalier disregard for the text of the Constitution is not. There is no drug exception to the Constitution, any more than there is a communism exception or an exception for other real or imagined sources of domestic unrest." To these jurists the plain English of the 4th Amendment requires probable cause and the issuance of a warrant to authorize the invasion of privacy in pursuit of criminal conduct. What could be more "textual"?

is illustrated by his remarks before The Catholic University of America in Washington, D.C. on October 18, 1996, wherein he observes that

> I belong to a school, a small but hardy school, called "textualists" or "originalists." That used to be "constitutional orthodoxy" in the United States. The theory of originalism treats a constitution like a statute, and gives it the meaning that its words were understood to bear at the time they were promulgated. You will sometimes hear it described as the theory of original intent. You will never hear me refer to original intent, because as I say I am first of all a textualist, and secondly an originalist. If you are a textualist, you don't care about the intent, and I don't care if the framers of the Constitution had some secret meaning in mind when they adopted its words. I take the words as they were promulgated to the people of the United States, and what is the fairly understood meaning of those words.
>
> I do the same with statutes, by the way, which is why I don't use legislative history. The words are the law. I think that's what is meant by a government of laws, not of men. We are bound not by the intent of our legislators, but by the laws which they enacted, which are set forth in words, of course. As I say, until recently this was constitutional orthodoxy. Everyone at least said that: That the Constitution was that anchor, that rock, that unchanging institution that forms the American polity. Immutability was regarded as its characteristic. What it meant when it was adopted it means today, and its meaning doesn't change just because we think that meaning is no longer adequate to our times.

Fine. The exact words of the Fourth Amendment germane to the argument of this thesis declare that *"[T]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures shall not be violated . . . "* The Amendment does not add a qualifier advising that "these strictures apply only to officials of the government," though such is indeed the popular (and mistaken) interpretation. Even had we no access to the extensive documentation of the Framers' intent with respect to the Fourth Amendment, we *know* from Cuddihy and a wealth of additional scholarly sources what the words "secure in their

persons" *meant* at the time of constitutional enactment. They meant that authority—*any* authority, whether law enforcement agents or proxies acting under color of the now-repudiated Writs of Assistance and private-sector Hue and Cry—could no longer search and seize indiscriminately. Both the "textual" and the "contextual" (original intent) historical/political meanings could not be more clear with respect to the paternity and applicability of the Fourth Amendment. The citizens of the nascent United States of America prized their liberty—and the personal privacy requisite for its effective functioning, privacy breachable only upon showing of sufficient and rational cause.

Privacy and suspicionless drug testing

While Judge Bork and his philosophical brethren insist on framing privacy issues exclusively in terms of specific individual acts that require case-specific Constitutional evaluation, more than a century ago former Supreme Court Justice Louis Brandeis alluded to a more general sense of privacy in his seminal 1890 Harvard Law Review article *The Right to Privacy: the implicit made explicit*, the source of his now oft-cited comment on "the right to be let alone." While Brandeis' monograph was occasioned by and directed toward his outrage over the excesses of the tabloid "yellow journalism" sensationalist media of his time, his argument for a "right to be left alone" is easily seen to fit with the textual proscriptions of the 4th Amendment. Brandeis and many other legal theorists take the 4th to indeed impel recognition of a more general right to privacy.

What are the implications of this "right to be let alone"—absent cause to intrude—in the context of indiscriminate drug testing? The three previously cited Supreme Court rulings pertaining to drug testing (Skinner, Von Raab, and Vernonia) all include the full text of the 4th Amendment and acknowledge its centrality to their holdings, stipulating that drug tests in fact constitute "searches" within the purview of the Amendment. The threshold questions the Court saw fit to address in these cases were:

1. Whether those seeking to test were "state agents,"
2. Whether the state or its designee had a compelling interest sufficient to trump individuals' privacy rights,
3. Whether the privacy intrusions were minimal relative to legitimate state interests, and
4. The purpose of the testing.

The first question owes to the distinction made between Constitutional protections afforded citizens against governmental activities and the tort remedies applied to privacy violations committed by private parties. This distinction is crucial to the legality of all manner of indiscriminate surveillance of employees and others in the private sector (recall Chapter 4). The second question addresses empirical assertions of exigency: are the nature, extent, and cost of drug abuse sufficiently adverse to warrant extreme measures? [see Chapter 2] Third, what is the severity of the intrusion? Collection of a urine sample is less invasive than that of an IV blood sample, and far less invasive than, say, forced stomach pumping or body cavity examinations in search of contraband. Finally, the ostensible purpose of the testing

program: prosecutorial or "administrative?" Following a trend developed in the lower courts over the last generation, the Supreme Court has allowed "administrative" or "special needs" exceptions to the "probable cause" and "warrant" requirements of the 4th Amendment. In short, since positive drug test results are supposedly "confidential" and not referred for prosecution—despite the fact that they constitute "scientific evidence" of recent criminal conduct—the Court finds them acceptable as mere non-discretionary administrative functions. Critics point out, however, that such can amount to "administrative punishment" with a concomitant denial of the 5th Amendment's guarantee of due process, given that the employment consequences for an individual testing positive are likely to be far more immediate and severe than the typical court conviction for drug possession.

One justification the court has set forth in defense of non-cause surveillance is seen in a footnote in *Von Raab* citing *United States vs. Edwards* [498 F2d 496, 500 (CA2 1974), validation of airline passenger searches], later cited by Justice Ginsberg in her *Vernonia* partial concurrence opinion. In *Edwards* the court noted that "the passenger has been given advance notice of his liability to such a search so that he can avoid it by choosing not to travel by air." A similar principle is held to validate workplace drug testing: consent constitutes waiver of any 4th Amendment or tort claim. Job applicants are free to seek work where testing is not policy. Given that, according to the American Management Association, more than 80% of major U.S. corporations now routinely test for drug use, however, employees have little choice in the matter. Moreover, the *Edwards* analogy is invalid on its face; those passing through airport detectors do not have their identities recorded unless they are

confirmed to be carrying proscribed items such as weapons or explosives. "False positives" (those who innocently set off the walk-through scanners or whose carry-on items appear suspicious under X-ray) are quickly searched by electronic wand and/or visual inspection of personal articles and then sent on their way. Where drug screens are concerned, however, identities *are* recorded and troublesome vagaries exist with respect to just who owns the resultant lab data, how long and by whom they must be kept, what criteria exist for breach of confidentiality, what the precise probabilities are for false positive findings, and what (if any) rights of appeal exist in the event of contested lab "positive" findings.

A recent example of the potential confidentiality problems can be seen in the suits filed by local law enforcement agencies to strike down the so-called "Brady Bill" Handgun Control Act signed into law by President Clinton. Local police found that in the course of the required background checks they would have to search for any existing drug test records of handgun applicants because under Brady "known drug abusers" are ineligible for a weapons license. Should someone with an undiscovered "positive" drug test record obtain a weapon and subsequently use it in the commission of a crime, the local agency might face liability. While local authorities mainly object to the "unfunded mandate" character of Brady, the drug test record search requirement adds an additional burden, and exemplifies a general difficulty with "confidentiality" policy issues.

"Privacy" or "Confidentiality"?

Congressional House Resolution 184, the "*Individual Privacy Protection Act of 1995*" sought to update federal laws regarding "privacy." Section 2(4) of the measure asserts that "the right to privacy is a personal and fundamental right protected by the Constitution of the United States." A close reading of the bill's specifics, however, leaves no doubt that Congress is almost exclusively concerned with "confidentiality" issues, principally with regard to digitally stored and readily disseminated personal data such as financial and medical records. Insurers, marketers, and inquisitors of every stripe wish to probe our digital histories in furtherance of their agendas. Errors and omissions in and misuse of these computerized repositories can lead to significant harms, hence the concerns over "confidentiality." As Seth Kreimer points out in *Sunlight, Secrets, and Scarlet Letters: The Tension Between Privacy and Disclosure in Constitutional Law*:

> In the course of her job, the bureaucrat learns more intimate details about citizens than would the police officer or judge . . . Information gathered in one arena is available for use in others. Similarly, the increasing rationalization and routinization of the private sector has generated stores of information potentially available to the government . . . Indeed, the government often intervenes to facilitate the process by requiring private parties to compile records.[120]

Endless policy disputes loom large given such realities: Recall the Brady Bill background check flap. Another example: In 1997 Newark welfare officials sought to

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[120] Seth Kreimer, *Sunlight, Secrets, and Scarlet Letters: The Tension Between Privacy and Disclosure in Constitutional Law*, University of Pennsylvania Law Review, Vol. 140, No. 1, Nov. 1991, pp. 3-4.

implement a computerized fingerprint ID system to help crack down on public assistance "double-dipping" by welfare clients simultaneously registering for benefits in multiple jurisdictions. Law enforcement agencies immediately announced their intent and authority to access the system in pursuit of those with unrelated outstanding criminal warrants. Another: The IRS is known to have for years indiscriminately sifted through taxpayers' credit and financial data in search of suspicious anomalies that might signal tax evasion. Yet another: Also in 1997 the Clinton Administration proposed new medical records privacy legislation. During a September 11th interview on National Public Radio, HHS Secretary Donna Shalala admitted that the new law would include exceptions permitting law enforcement access to patient data.

Finally, consider a firm now known as ChoicePoint. As they tout in a recent press release:

> ChoicePoint offers its customers a suite of employee-related risk management tools. These services include drug testing administration and program management, background verifications, public records searches, credit reports, motor vehicle records, and employee verification database services.

ChoicePoint is a corporate descendant of Equifax, one of the major national credit bureaus, one with a less than stellar history of data accuracy. The ChoicePoint marketing slogan winks at us: "Information has always been available. ChoicePoint makes it accessible." Amid their promotional literature is a curious observation:

> Companies are becoming concerned with the choice points their employees face in their non-professional lives. We at ChoicePoint keep abreast of the issues and trends both in and out of our market focus,

> in anticipation of what we believe to be a future opportunity of risk assessment information delivery.

Interesting, no? Should we have any confidentiality concerns here? Is our government, given the current predominantly anti-regulatory political climate, up to the task of constraining information-traffickers such as ChoicePoint, a company ever on the lookout for opportunities to help employers monitor and manage the "non-professional" (i.e., private) aspects of their employees' lives? A company now also directly in the business of drug testing?

Don't worry, be happy? Consider a couple of closing confidentiality tidbits. First, MIB, the Medical Information Bureau, wherein reside a good bit of data beyond merely records of your medical encounters:

> MIB, based outside of Boston, is an organization with approximately 750 member insurance companies. It collects and furnishes information on consumers to all MIB members for use in the insurance underwriting process. In addition to an individual's credit history, data collected by MIB may include medical conditions, driving records, criminal activity, and participation in hazardous sports, among other facts. MIB's member companies account for 99 percent of the individual life insurance policies and 80 percent of all health and disability policies issued in the United States and Canada.[121]

On November 11, 1993, CBS Morning News reported on a flap involving MIB that had to do with the supposedly confidential medical records of U.S. Congresswoman Nydia Velasquez (D-NY). During the 1992 election campaign, Ms. Velasquez's political opponents leaked information regarding her distant psychiatric

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[121] Federal Trade Commission, [http://www.ftc.gov/opa/9506/mib.htm], March, 1998.

history, including details of her long-ago hospitalization for suicidal depression. The CBS report noted that no federal laws were violated in the acquisition and dissemination of this information, and that commercial information brokers routinely acquired such types of data with profitable impunity.[122]

"Have you ever . . . ?"

A large, prominent newspaper ad periodically appearing the Las Vegas newspapers in the early 1990's issued a bold warning: "*If you're not pre-employment drug testing, you're hiring the rejects of those companies that do!*" The assertion is

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[122] We have heretofore alluded to the putative "confidentiality" of drug testing results. Video rental records (as an ironic legislative result of the Robert Bork Supreme Court nomination hearings) currently have more federal privacy protection than do drug screen results. Drug testing confidentiality is weakly and tangentially addressed in 42.USC.290dd-2 et seq, which goes on to specify the conditions under which records may be released. Section (b)(2)(C) provides for the breach of confidentiality if so ordered by "any court of competent jurisdiction . . . " Congressman Solomon's H.R. drug testing legislative proposals have sought to further enfeeble the inviolability of such records. Submitting to a non-cause drug test causes the creation of a quasi-medical record of uncertain longevity and custody, over which the "donor" has no control or right of review or challenge. Those sanguine about the security of such data should perhaps ponder the recent eye-opening book by Jeffery Rothfeder, Privacy For Sale: How Computerization Has Made Everyone's Private Life An Open Secret, (NY, Simon & Schuster, 1992) wherein is documented the ease with which professional "data harvesters"—often armed with nothing more than a telephone and a modem-equipped home computer—manage to access the most intimate of personal information for their clients. Given that some facilities record drug test results as either "positive" or "negative" *or* "inconclusive," and further given the economic imperatives to cut methodological corners in deference to bottom lines (e.g., preemployment "clinical quality" unconfirmed screening), one is ill-advised to take lightly the generation of such potentially destructive, possibly erroneous personal information. Imagine having to account some years hence to a prospective employer (or security clearance investigator, etc.) regarding the meaning of an "inconclusive" (not to mention a $20 unconfirmed false positive) drug screen result of which one was utterly unaware.

targeted straight at the anxieties of human resources managers. As Kim Broadwell noted:

> A group of managers, when asked why their companies had instituted preemployment drug screening, indicated that their overriding concern was to avoid hiring drug-using applicants who had failed drug screens at other companies in their area.[123]

Recall the four hypothetical job application questions posed at the outset of this inquiry:

1. Have you ever committed a crime for which you were not apprehended?
2. Do you now engage in ongoing or periodic criminal conduct?
3. Do you support the war against drug abuse?
4. Are you willing to submit proof of the foregoing?

How about one more?

5. Have you ever been tested for illegal drug use before?
5.a. If yes, please list all places and dates (attach additional sheet if necessary).

More plausibly, since it is certain that questions 1 through 4 would be found impermissible, just place question 5 on the application amid the other routine queries. Why could you not? Well, first because prior drug testing records are ostensibly "confidential." But, since a principal justification for employment drug screening hinges on management imperatives to assess applicant and employee physical-fitness-for-duty and to minimize employee health benefits expenditures, these data are, at least in part, effectively "medical" records (and relevant thereby

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[123] D. Kim Broadwell, *The Evolution of Workplace Drug Screening*, The Journal of Law, Medicine, and Ethics, Vol. 22, No. 3, Fall 1994, p. 241

to employer interests). Should you undergo a physical exam for private health or life insurance, for example, the fine-print waiver you sign on the consent form—putative "confidentiality" boilerplate provisions notwithstanding—gives the underwriter permission to traffick in your results, exchanging them with others perhaps "having a need to know" (in their judgment) in the "ordinary course of business" through data warehouses such as the Medical Information Bureau. (Please: next time read the tiny, light print on the back of those consent and/or claims forms you sign.)

Simply knowing via a records search that job candidate X had tested negative on two dozen prior occasions—or, tested positive merely once—would tell a hiring decision-maker essentially everything he or she needed to know with respect to likely (or actual) prior drug use, without having to waste money on an additional screen.

We can rest assured, however, that commercial data harvesters such as ChoicePoint, despite their soothing marketing assurances that they can make the all data you need "accessible," would demur, given this type of request. They would in fact likely be in the forefront of defending the precious "confidentiality" of such data—given their conflicting financial interest in selling further drug testing services (unless, of course, they could somehow persuade the client to pay actual drug testing prices for the archival data). One can imagine their representatives testifying before Congress in support of legislation such as H.R. 184, heads nodding in solemn sworn agreement that, indeed "the right to privacy is a personal and

fundamental right protected by the Constitution of the United States." Lest data-dredging competitors, unencumbered by the marketing complications of a ChoicePoint, divert a big chunk of the drug testing revenue into mere digital bio-info-assays.

Finally, consider the implications of all the foregoing in this section in light of a recent Washington Post article by Jane Bryant Quinn:

> How Your Credit Could Affect Your Career
>
> By Jane Bryant Quinn, Tuesday, March 11, 1997, The Washington Post
>
> NEW YORK—When you apply for a job, you expect the company to check your references. But do you also expect it to pull your credit report?
>
> Tens of thousands of employers take a peek at this slice of your personal life: Do you have big debts, do you pay bills on time, have you ever been sued by a creditor, is there a tax lien on your home or a bankruptcy in your past?
>
> Employers use these reports "to serve as a general indicator of an applicant's financial honesty and personal integrity," says Experian (formerly TRW), one of the three major credit bureaus . . . [124]

Recall Kreimer's observation above. Don't worry, be happy? Do any of us have the slightest clue ongoing as to what our "reasonable expectations of privacy" are across the length and breadth of interactional domains? Any clue as to the extent of the uses to which our personal data are daily being put?

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[124] Jane Bryant Quinn, *How Your Credit Could Affect Your Career*, The Washington Post, [http://www.washingtonpost.com/wp-srv/business/longterm/quinn/columns/031197.htm], March 11, 1997.

Beyond confidentiality

Privacy scholars see 'confidentiality" as only one element in the privacy matrix. In 1960 William Prosser reported on a content analysis of more than three hundred privacy tort cases.[125] He noted four basic characteristics of "privacy" as revealed by litigation over its breach:

1. An intrusion into the plaintiff's seclusion or solitude, or into his private affairs;
2. Public disclosure of embarrassing private facts about the plaintiff;
3. Publicity which placed the plaintiff in a false light in the public eye;
4. Appropriation for the defendant's advantage, of the plaintiff's name or likeness.

While intuitively sensible, the foregoing is rather tautological in using the word "private" in defining certain aspects of privacy. Whereas false light issues fall under the domains of libel and slander law, and misappropriation of name or likeness is a "property rights" issue, what, we are left asking, constitute our "private affairs" and "private facts"? Privacy skeptic Richard Posner observes that "[M]uch ink has been spilled in trying to clarify the elusive and ill-defined concept of 'privacy'".[126] Posner continues:

> I will sidestep the definitional problem by simply noting that one aspect of privacy is the withholding or concealment of information.

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[125] Richard B. Parker, *Privacy*, Readings in the Philosophy of Law, J. Arthur, and S. Shaw, Ed., (Englewood Cliffs, NJ, Prentice-Hall, Inc., 1984) p. 608.

[126] Richard A. Posner, *An Economic Theory of Privacy*, Philosophical Dimensions of Privacy: an Anthology, F. Schoeman, Ed. (Cambridge, UK, Cambridge University Press, 1984), p. 333.

> This aspect is of particular interest to the economist now that the study of information has become an important field of economics. It is also of interest to the regulator, and those affected by him, because both the right to privacy and the "right to know" are becoming more and more the subject of regulation.[127]

Posner goes on to note that privacy provides

> opportunities for exploitation through misrepresentation. Psychologists and sociologists have pointed out that even in everyday life people try to manipulate other people's opinion of them, using misrepresentation. The strongest defenders of privacy usually define the individual's right to privacy as the right to control the flow of information about him. A seldom-remarked corollary to a right to misrepresent one's character is that others have a legitimate interest in unmasking the misrepresentation.[128]

Posner makes a cogent observation, and his point goes to the heart of the suspicionless drug testing issue. Many privacy skeptics view the claim of a privacy right as "the guilty man's privilege." Defenders of Constitutionally-protected privacy, on the other hand, bristle at the notion, retorting that fundamental to our jurisprudential tradition is that the individual need not "prove" his or her innocence—that, absent reasonable evidence of misrepresentation, adverse inference pursuant to a privacy claim is demagoguery, pure and simple, inadmissible in court and unethical in social discourse. Posner's view, while valid to an extent, is overbroad in its assumption that deception is a substantial motivating force of the privacy claimant.

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[127] ibid.

[128] ibid., pp. 334-5.

The value of privacy

The drug-abstinent person objecting to a suspicionless drug test on principle stands at a significant rhetorical disadvantage, given the widespread view of this particular privacy claim as indeed a manifestation of "the guilty man's privilege," and further given the framing of the issue in a way that requires the individual to justify his or her refusal. In Legislating Privacy: Technology, Social Values, and Public Policy, however, Priscilla Regan argues that we must re-frame the issue 180 degrees for a proper perspective and defense of privacy:

> The philosophical basis of privacy policy overemphasizes the importance of privacy to the individual and fails to recognize the broader social importance of privacy. This emphasis on privacy as an individual right or an individual interest provides a weak basis for formulating policy to protect privacy . . . As a result privacy has been on the defensive, with those alleging a privacy invasion bearing the burden of proving that a certain action does indeed invade privacy and that the "social" benefit to be gained from the privacy invasion is less important than the individual harm incurred.[129]

Regan sees in the extensive empirical data gathered to assess "privacy concerns" throughout the past twenty-odd years (and which she summarizes in some detail in her book) an inadequately articulated recognition of privacy as a social value:

> Privacy is a common value in that all individuals value some degree of privacy and have some common perceptions about privacy. Privacy is also a public value in that it has value not just to the individual or to all individuals in common but also to the democratic political system. The third basis for the social importance of privacy is derived from the theoretical literature in economics. Privacy is rapidly becoming a collective value in that technology and market forces are

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[129] Priscilla M. Regan, Legislating Privacy: Technology, Social Values, and Public Policy, (Chapel Hill, NC, University of North Carolina Press, 1995), pp. 212-3.

> making it hard for any one person to have privacy without all persons having a similar level of privacy.[130]

For Regan, "viewing privacy as a common value—as a social claim rather than an individual claim—would also shift the burden of proof":

> Rather than leaving it up to individuals to show damages or to prove willful intent on the part or the record keeper, the burden would be placed on the organization. The organization would be responsible for justifying the need for the information rather than the individual being responsible for justifying withholding the information.[131]

Which, of course, brings us right back to 4th Amendment "reasonableness" and "probable cause" in the context of drug testing policy. Given that the proportion of people objecting to indiscriminate drug testing is far greater than the most generous yet plausible estimates of the prevalence of drug users, a reflexive insinuation of "guilty privilege" is unsustainable. The vast majority of those opposed to suspicionless testing indeed have "nothing to hide." Beyond an understandable sense of indignation, the practical basis for their objections, however inchoate for some, cannot be but that they have no information "of value" to add (being drug-free), nothing to gain, and everything to lose should things go awry. Moreover, and pertinent to the "social value" perspective of privacy Regan advocates—albeit in a purely utilitarian way—submission without cause in fact adds to the probability that things *will* go awry for some.

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[130] ibid.

[131] ibid., p. 232.

Finally, what of "an understandable sense of indignation" at being pressured or coerced to "prove" one's abstinence? Is such a legitimate response? A plausible reading of Kantian principles of reciprocity and "universal maxims" might have us conclude that, rather than framing the privacy issue as one of "right" versus "duty," perhaps we have a "duty" to defend this fundamental "civil right" as the core element of reciprocal autonomy it truly is. Kant was adamant regarding our duty to be truthful. He was equally adamant with respect to the propriety of indignation as response to gratuitous or groundless insinuations of cover-up:

> The man who is asked whether or not he intends to speak truthfully in the statement that he is now to make and who does not receive the very question with indignation as regards the suspicion thereby expressed that he might be a liar, but who instead asks permission to think first about possible exceptions—that man is already a liar (*in potentia*). This is because he shows that he does not acknowledge truthfulness as in itself a duty but reserves for himself exceptions from a rule which by its very nature does not admit of any exceptions, inasmuch as to admit of such would be self-contradictory.[132]

Well, that begs the obvious rub, insofar as liars can and do adopt the indignant response in ruse. Such has always been the case, but equally obvious should be that inverting the due process "presumption of innocence" fundamental to our political and legal order will have little to no effect whatever on the mores of the duplicitous. It will, however, ensure that society in general becomes comprised of those who—as Justice Scalia stated so well in his *Treasury* dissent—"suffer a coarsening of our

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[132] Immanuel Kant, *On a Supposed Right to Lie Because of Philanthropic Concerns*, [430], in Grounding for the Metaphysics of Morals, 3rd Edition, translated by J.W. Ellington, (Indianapolis, Hackett Publishing Co., 1993), p. 67.

national manners that ultimately give the Fourth Amendment its content, and who become subject to the administration of federal officials whose respect for our privacy can hardly be greater than the small respect they have been taught to have for their own."

Smith claims she is "clean," and her resume tends to back her assertion. Jones suspects otherwise, often on the basis of irrelevant or bogus "data." Beyond "mere" legalisms, the moral burden of proof is on the latter. Smith has a moral claim to indignation in response to groundless inquiry. A duty, even. Adverse inference toward such indignation is the moral equivalent of the *ad hominem* attack, disdained in rational discourse, ethically bankrupt in policy practice.

A brief cultural and historical sampling of privacy practices (or, Kant in the tundra amid the Utkuhikhalingmuit)

Many privacy scholars answer the skeptics by pointing to the considerable ethological, anthropological, psychological, and philosophical evidence supporting the need for and acceptance of privacy. First, almost all higher species tend to exhibit cyclical behavior patterns of immersion in and withdrawal from the group. As Alan Westin observes in *The origins of modern claims to privacy*:

> Man likes to think that his desire for privacy is distinctively human, a function of his unique ethical, intellectual, and artistic needs. Yet studies of animal behavior and social organization suggest that man's need for privacy may be rooted in his animal origins, and that men and animals share several basic mechanisms for claiming privacy among their own fellows . . .
>
> One basic finding of animal studies is that virtually all animals seek periods of individual seclusion or small-group intimacy. This is usually described as a tendency toward territoriality, in which an

> organism lays claim to an area of land, water, or air and defends it against intrusion by members of its own species.[133]

Westin finds interpersonal mechanisms of "social distance" a nearly universal phenomenon, albeit one with broadly divergent culture-specific parameters. He cites the research of numerous anthropologists as evidence of varied yet widespread acceptance of privacy, allowing the caveat that "[O]ne could compile a long list of societies, primitive and modern, that neither have nor would admire the norms of privacy found in American culture-norms which some Americans regard as 'natural' needs of all men living in society." However, he goes on to point out that

> Yet this circumstance does not prove that there are no universal needs for privacy and no universal processes for adjusting the values of privacy, disclosure, and surveillance within each society. It suggests only that each society must be studied on its own terms . . . to see whether there are norms of privacy called by other names, and recognizing the difficulties in making cross-cultural comparisons. The analysis must also recognize the fact that there are psychological ways of achieving privacy . . . which are crucial in those societies where communal life makes solitude or intimacy impossible within the living areas.[134]

Barrington Moore provides a detailed account of personal adjustments to just such spartan communal living arrangements in *Privacy, Anger, and Dependence: Notes on an Eskimo Community* wherein researcher Jean L. Briggs reports on her experience of seventeen months spent living far above the arctic circle with the

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[133] Alan Westin, *The origin of modern claims to privacy,* originally from Privacy and Freedom, (New York Bar Association, 1967) in Philosophical Dimension of Privacy: An Anthology, Schoeman, Ferdinand, Ed., (Cambridge University Press, 1984), p. 56.

[134] ibid., p 60.

Utkuhikhalingmuit Eskimo tribe of Canada (the "Utku"). Moore notes that because of their atomistic economy,

> the Utku cherish independence of thought and action as a natural prerogative and look askance at anyone who shows signs of wanting to tell them what to do, . . . Briggs also found them a people reluctant to answer questions. They displayed "an extremely strong sense of privacy with regard to their thoughts, their feelings, and their motivations; and I feared to offend it."[135]

Moore notes, however that, because of the harshness of their physical environment and its relentless assault on basic survival, "the Utku like other Eskimos soften their individualism with a strong emphasis on reciprocity and responsiveness to the needs of others."[136] On the other hand, this sense of shared obligation is tempered by a distinction between legitimate and illegitimate obligations:

> Briggs reports that the Utku resent any sign of bossiness. Among the Utku nobody has the right to tell other people what to do, and everybody has the right to reject an intrusion on his or her freedom of action. The feeling seems to be so strong that such intrusions hardly ever take place.[137]

A sense of legitimate reciprocal obligations with a concomitant disdain for presumption and intrusion into one's private zone? Rather Kantian, it would seem.

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[135] Barrington Moore, *Anthropological Perspectives,* Privacy: Studies in Social and Cultural History, (Armonk, NY, M.E. Sharpe, Inc, 1984), p. 7.

[136] ibid., p. 8.

[137] ibid., p. 72.

And a validation of privacy as an ethical principle as seen in one of the harshest and most physically restrictive social environments.

Moore goes on to examine the nuances of the private in Classical Athenian, Old Testament Hebrew, and ancient Chinese cultures, concluding that nearly all societies sufficiently advanced to have an organized "public" of any consequence provide for the "private," even if only minimally through informal cultural norms of tolerance, irrespective of the formal structures of law and political power:

> To summarize very briefly, the evidence shows that even authoritarian regimes with universal moral claims on the population are capable of developing some institutions that protect ordinary subjects from some abuses of power. But there are close limits on how far such trends can go. Democratic polities provide a more favorable setting for such trends and for personal autonomy as well. But in a democracy there are also limits and obstacles. For various reasons, such as war and economic despair large sections of the population may turn to atavistic forms of loyalty, with suspicion of ideas and thinkers that seem the least bit unconventional. They take up Community with a vengeance and in its name suppress all forms of dissidence. Out of fear or secret sympathy (or both) sections of the elite may abet or even lead such popular movements. All in all, the wonder is not that privacy rights have been attacked or suppressed but that they have managed to grow at all.[138]

The foregoing observation should have a disturbingly familiar ring to anyone even mildly familiar with our present-day "war on drugs."

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[138] Moore, op cit., p. 274.

Beyond empiricism: privacy and virtue

We can cite ethology, anthropology, and political history in empirical defense of privacy. We can argue that privacy has proven a necessary tool for the individual to employ in the operation of checks and balances against the abuse of power. We can point out that privacy is perhaps the most fundamental of democratic political rights, requisite for the functioning of all others—we do, after all, take the social good of the secret ballot as a given. We can cite the substantial and credible psychological literature asserting the central role of privacy in the very formation of a socially competent persona. But nagging concerns will linger, with skeptics insisting that privacy thwarts community whereas self-disclosure promotes it. As Barrington Moore concludes:

> Privacy cannot be the dominant value in any society. Man has to live in society, and social concerns have to take precedence. In both ancient Greece and ancient China the words for private and public existed, with the words for private conveying some hint of the antisocial in their meaning. Among the ancient Hebrews prior to the monarchy, we find no distinctions between public and private. Yahweh seems to have played the role of the public. Thus all three civilizations displayed a feeling of priority for social concerns, but this priority does not mean that all social concerns always take precedence. The great civilizing achievement in the concept of privacy has been its questioning of social concerns. That was mainly an achievment of Western civilization.[139]

Judith Swanson, in The Public and the Private in Aristotle's Political Philosophy, agrees. While acknowledging that, "[I]f Aristotle lived in the twentieth-century western world, he might agree with communitarian critics that

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[139] Moore, op cit., pp. 274-5.

disequilibrium between the public and private exists,"[140] Swanson insists that Aristotle's political philosophy "defends privacy as vigorously as liberalism, but better." Echoing sentiments set forth by Priscilla Regan, Swanson observes that

> Liberalism, by conceiving privacy as a set of rights forming a protective bubble around every individual, enabling them to do whatever they like within it, justifies privacy only from the point of view of the individual, not from that of the public . . . Aristotle offers a corrective to liberalism's conception of privacy in that he conceives the private to be virtuous activities that discount popular opinion; the private thus benefits the individual and, thereby, the public . . .
>
> Aiming at excellence, private activity cannot accommodate prevailing values (except in the best regimes). This is in fact fortunate from the point of view of the regime; by resisting what is merely fashionable or politically necessary, private activity embodies a standard of excellence that political activity can aspire to uphold.[141]

Aristotle's defense of the private is *not*, however, to be construed as an endorsement of pure individualism, as we readily see in *Book Nine* of the Nicomachean Ethics:

> No one would choose to have all good things by himself, for man is a social and political being and his natural condition is to live with others. Consequently, even a happy man needs society. Since he possesses what I by nature good, it is obviously better for him to spend his days with friends and good men than with any stranger who comes along. It follows that a happy man needs friends. [NE 1169b 20][142]

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[140] Judith Swanson, The Public and the Private in Aristotle's Political Philosophy, (Ithaca, NY, Cornell University Press, 1992), p. 208.

[141] ibid., pp. 207-8.

[142] Aristotle, Nicomachean Ethics, Translated by Martin Ostwald, (New York, MacMillan Publishing Company, 1962).

Aristotle acknowledges, however, that it would "seem to be impossible to be an intimate friend of many" [NE 1171a 10] and that we "must be content if we find even a few friends of this kind." [NE 1171a 20] The cultivation of intimate friendships cannot but assume the moral worth of a private sphere into which the polis may not, without just cause, intrude.

Similarly, Aristotle's comment in *Book Ten* that "complete happiness consists in some kind of contemplative activity" [NE 1178b 10] further supports Swanson's interpretation of Aristotelian defense of the private. The divine bliss of contemplative study, again, necessarily assumes the intrinsic worth of a private domain. Moreover, Aristotle's subsequent observation that "private individuals do not act less honorably but even more honorably than powerful rulers" [NE 1179a 5] supports Swanson's argument that "private activity cannot accommodate prevailing values (except in the best regimes)."[143]

While insisting that cultivation of cardinal moral habits *requires* the private, Swanson would agree with privacy skeptics that, for some, privacy indeed provides little more than a cover for self-indulgence, a refuge "largely for letting go of virtue."

> As a consequence of their using the private in this way, the private has little to offer the public. Moreover, Aristotle would perhaps point out that the unpreparedness of people today to engage properly in private activity is in part the result of laws and educational institutions failing to encourage the proper use of privacy.[144]

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[143] Swanson, op cit., pp. 207-8.

[144] Swanson, op cit., p. 208.

Well, yes—but for those who would interpret such counsel as justification for policies requiring indiscriminate searches of all in search of the dissolute few, the words of John Stuart Mill (On Liberty) regarding moral education come to mind:

> The existing generation is master both of the training and the entire circumstances of the generation to come; it cannot make them perfectly good and wise, because it is itself so lamentably deficient in goodness and wisdom . . . but it is perfectly well able to make the rising generation, as a whole, as good as, and a little better than itself. If society lets any considerable number of its members grow up mere children, incapable of being acted upon by rational consideration of distant motives, society has itself to blame for the consequences . . . let not society pretend that it needs, besides all this, the power to issue commands and enforce obedience in the personal concerns of individuals, in which, on all principles of justice and policy, the decision ought to rest with those who are able to abide the consequences.[145]

Any applicability herein of Mill's observation must, in fairness, be tempered by a recognition that the interdependencies we face today are considerably more complex than those faced by Mill and his contemporaries. The consequences of intoxication today hold the potential of widespread harm of a severity seldom experienced in earlier times. It is important to recall, however, that this thesis is—again—focused on those who are drug-free, and it is far from clear that the bulk of the abstinent are so as a result of continual suspicion and surveillance during the time of their upbringing.

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[145] John Stuart Mill, On Liberty and other writings, Stefan Collini, Ed., (Cambridge, UK, Cambridge University Press, 1989), pp. 83-4.

Chapter summary

Virtuous moral character is not a mere function of the ongoing prod of actual or threatened surveillance. The virtuous person is one who is motivated by intrinsic goods, who chooses the good even in the absence of observation or the threat of punishment. In the context of this discussion it is incontrovertible that the vast majority of Americans are drug abstinent, despite the ready availability and ever-lower cost of drugs. Moreover, this preponderant preference for sobriety (or at least temperance) owes to positive motivating factors (i.e., "moral habituation") considerably more complex than any (largely theoretical) anxiety regarding detection. That a small minority will indulge themselves in proscribed risk-taking to sometimes tragic excess—even in the face of surveillance measures and severe sanctions—in no way reflexively legitimates the disembowling of the Fourth Amendment and the very real moral good it codifies.

While it is beyond dispute that a social order has both right and obligation to take reasonable measures to prevent harm, a timorous society of chronic suspicion which accedes to the arbitrary violation of the private in search of mostly apparitional heresies cannot but beget a culture of secrecy, expediency, disrespect for law, and—ultimately—political instability. We ought indeed take care that we not "destroy the village in order to save it." It required a long struggle entailing much blood and tears to build it.

Next: answering the critics forthrightly, and some concluding observations (Chapter Seven).

CHAPTER SEVEN

Addressing counter-arguments.

In this chapter we address the principal rebuttal arguments advanced by those who either actively favor suspicionless drug testing or are indifferent to the issue (seeing in it much ado about little to nothing).

Objection 1: *All of this high-minded hand-wringing over drug screening vis a vis the Fourth Amendment is just so much hot air—the 4th is not germane here; no job applicant, employee, athlete, or student has ever had a positive test result forwarded to the authorities for prosecution—the only circumstance which would rightfully bring the Fourth Amendment into play. Administrative privacy violations are properly dealt with in tort venues.*

A phrase emblematic of the Vietnam War comes to mind: *Grab 'em by the balls, and their Hearts and Minds will follow.*[146] In South Vietnam in the early 1960s, early U.S. "pacification" policy intent was to "win the hearts and minds" of the peasants in the south in lieu of bashing them collaterally amid scorched-earth pursuit of the Vietcong. Military cynics, however, saw mass coercion as the only effective policy for rooting out the elusive enemy—that "pacification" constituted mere sophomoric think-tank sociological hogwash.

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[146] Stanley Karnow, Vietnam: A History, (New York, The Viking Press, 1983) pg. 435.

Our Drug War policymakers see things much the same way (recall the proposals of Congressman Gerald Solomon): threaten you with potentially ruinous extraconstitutional administrative summary punishment by having your (assertedly Fourth Amendment-immune) private employer place your job at risk and perhaps you will comply, maybe even get on board with your Heart and Mind to assuage your cognitive dissonance regarding your forced participation in "Jar Wars." Tactically, it's hard to beat; more or less analogous to the way in which "soft money" is used to circumvent campaign finance law: No overt "prosecution" of positive test results, no policy-impeding Fourth Amendment linkage.

But, as we have already documented extensively, it is easily demonstrated that our government is deeply involved in the promotion of suspicionless drug testing with clear extrajudicial intent despite the fact that such harks back to the historically repudiated General Writs of Assistance that inspired revolution and the very same Fourth Amendment that should indeed be brought to bear in addition to any potential tort relevance. Moreover, as made clear through the stare decisis chain flowing back from the recent *Chandler v. Miller* drug testing decision, the fact that law enforcement authorities have yet to make overt evidentiary use of positive drug test findings does not imply that they *cannot*. They clearly can, for prosecutorial use of privately discovered evidence has mostly been ruled constitutional. Chief Justice Rehnquist's continuing "administrative exception" apology for suspicionless drug testing is the classic straw man argument. Administrative of what?, we must ask. Summary judgment and immediate administrative punishment without due process, that's what. Read again the

Chandler precedents analysis in the latter section of Chapter 4. Such may indeed have become permissible, but only in contravention of the original intent of the Fourth Amendment.

Objection 2: *Managers have ongoing and pressing production work to tend to; they cannot be expected to also don the role of drug detectives endlessly ruminating over the legalistic nuances of "probable cause." Moreover, restricted to "cause" testing, managers might hesitate to ever invoke it for fear of being sued by those claiming harassment—however frivolously—in the wake of subsequent negative assays.*

Managers typically must and do invoke a host of disciplinary measures "for cause" on a routine basis. It goes with the territory, as does the possibility of being sued for harassment by aggrieved workers. The most effective managers, however, are *leaders* who earn the trust and cooperation of their subordinates through principled behavior; they find it overwhelmingly unnecessary to rule by threat of force.

I *am*, however, acutely aware of the problems inherent in assessing the meaning of "probable cause." Go to the dictionary: probable is defined as that which is likely. Go to likely, and it is defined as that which is probable. To the statistician, "probable" minimally connotes more likely than not, or >50% chance of an event (which can only be verified empirically). Finally, as a term of art in law, "probable" means "that set of facts and circumstances which would lead a reasonable and prudent person to conclude that an event did in fact occur" (paraphrasing Black's Law Dictionary). An attorney of my acquaintance once remarked that "we go to law school for three years to try to learn the meaning of the word reasonable." Such is

nothing new: Cuddihy points out that "cause" ambiguity pervaded legal procedure during the 18th century:

> In most circumstances, judges issued warrants automatically on a person's sworn complaint that he suspected, rather than believed that a place or person was connected to a crime.[147]
>
> "Probable" had diverse meanings in 1789: "likely," "possible," even "credible." In the context of contemporaneous usage, the Fourth Amendment assumed the least restrictive understanding of "probable cause" then available, what might now be termed "plausible cause" or "possible cause."[148]

Whatever the potential difficulties with operationally defining "reasonable" or "probable" cause, however, it is clear that no employer relinquishes the right to act "for cause" given the presence of random or blanket selection procedures in the disciplinary tool kit. That employers must act with a bit of circumspection in this regard is a *good* thing.

Objection 3: *The "democratic" nature of mandatory testing: Everyone (ideally) from the CEO to the janitor is treated equally.*

This one can be labeled *Gramps and Granny the Wal-Mart Greeters Do Their Bit for Corporate Democracy and the War On Drugs*. Axiomatic to science are coherent sampling plans. Consider an analogy from the environmental remediation field. With respect to random drug tests, this "democratic & fair" counter-argument is the methodological equivalent of saying "Well, we know there's serious environmental pollution out there, let's just sample the soil and water indiscriminately to find out

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[147] Cuddihy, op cit., p. 1351.

[148] Cuddihy, op cit., p. 1527.

just how bad it really is so that we can put a stop to it and clean things up." Such may indeed be appropriate should one have *no* idea whatever of the extent and distribution of a problem and preliminary study is warranted, but where drug abuse is concerned, we have boatloads of data estimating the prevalence rates among various strata.

There is a humorous vignette in General Colin Powell's memoir recounting the time his number came up for a random drug test and he was handed his notice as he was finishing up a press conference. Does anyone believe for a moment that this distinguished American leader needs to be screened for drug abuse? From Gramps to Granny to the General, such represents *nothing* beyond our 50 mL. Loyalty Oath.

Again, it may be convenient policy taken on faith to possess significant deterrent and symbolic value, but it is not sound epidemiological science.

Objection 4: *Employers and co-workers have a right to safe and productive enterprises. Moreover, employers that fund life and health insurance benefits have a justifiable imperative to minimize such expenses. If you apply for private life and/or health insurance, you will be tested for street drugs in the course of the physical exam. Invasion of your privacy? What about the rights and obligations of the underwriter?*

The extent of the problem in the workplace is in serious dispute, and the wholesale efficacy of suspicionless drug testing in effecting significant gains in health, safety, and productivity is not demonstrated. Recall again the findings of National Academy of Science's National Research Council/Institute of Medicine 1994 report Under The Influence? Drugs and the American Workforce:

- Most alcohol and other drug users do not develop patterns of clinically defined abuse or dependence
- Among illicit drug users, polydrug use, most often including the use of alcohol and tobacco, is the norm rather than the exception.
- Any program that addresses drug use by the work force should include alcohol , the drug most associated with perceived detrimental job performance, *as a priority* (emphasis mine).
- Widely cited cost estimates of the effects of alcohol and other drug use on U.S. productivity are based on questionable assumptions and weak measures . . . Business decision makers and policy makers should be cautious in making decisions on the basis of the evidence currently available.[149]

Given that tobacco and alcohol arguably account for in excess of 90% of the damage, it is remarkable that we do not seriously propose subjecting all workers to random alcohol and tobacco tests, is it not? Why *not*? Because, the apology invariably goes, "those are legal substances." But, one cannot but conclude from such a response that the suspicionless drug test *does* in fact serve an expedient adjunct law enforcement goal.

Moving along: yes most private insurance exams do entail running the urine and serum samples for street drugs. Interestingly, you will be queried verbally during your insurance application interview as to your alcohol and tobacco consumption, but such will not be verified through bioassay, even though the far greater likelihood of aggregate underwriter loss owes to these legal intoxicants rather than drugs of the illicit kind.[150]

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[149] Normand, et al, op cit., pp. 3-13.

[150] This may soon change, and is likely to also be highly controversial. See below:

But, then, insurance companies frequently act in ways that defy actuarial sense. One need only consider current policy hand-wringing over the specter of genetic profile discrimination. Indeed, the Clinton Administration recently proposed outlawing employment discrimination on the basis of genetic tests (see below), and David Shenk, in his recent article *Biocapitalism: What Price the Genetic Revolution*,[151] points out that a variety of genetic mutations thought to be health risk markers are certain to be summarily declared to be "pre-existing conditions" mandating underwriting exclusion. Such knee-jerk exclusionary tactics will undoubtedly be challenged in the courts, where one hopes the crude nature of current genetic risk assessment will be exposed.

Test Developed to Find Heavy Drinkers

WASHINGTON (Reuters, 2/9/98) – University of Iowa researchers said Monday they had devised a battery of tests that could help show whether someone was a heavy drinker. Such a test series, if proven to work, could be used by both employers and insurance companies, they said.

Dr. Arthur Hartz and colleagues said 10 commonly performed laboratory tests, such as checks for chloride, sodium, high density lipoproteins and blood urea nitrogen, accurately predicted who was a heavy drinker when taken and analyzed together. "This is a step forward, but it needs to be validated to prove its reliability," Hartz said in a statement.

The findings were published in the Journal of Clinical Epidemiology. Hartz's team did 40 separate tests on 426 self-described heavy drinkers and 188 light drinkers. They said their 10 tests correctly identified 98 percent of the heavy drinkers and 95 percent of the light drinkers.

[151] David Shenk, *Biocapitalism: What Price the Genetic Revolution*, Harper's Magazine, December, 1997, pp 37-45. Also: on May 1, 1997 the Associated Press, citing a study published in the May 1997 issue of Molecular Psychiatry, reported the isolation of a "heroin abuse" gene. Will we see a pre-employment drug abuse "gene screen" once the assays become price-competitive with current methods? Absent legal proscription, such is *certain*.

Clinton seeks genetics protections

WASHINGTON, Jan. 20 (UPI) The Clinton administration has endorsed legislation in Congress that would prohibit companies from discriminating against workers in hiring or promotion on the basis of their genetic makeup. The endorsement was announced today by Vice President Al Gore, who argued: "The fear of genetic discrimination is prompting Americans to avoid genetic tests that could literally save their lives."

The proposed legislation would ban companies from requiring or requesting a genetic test or genetic information as a condition of employment or benefits, and ban the disclosure of such information without the patient's full consent. It would also prohibit employers from using genetic information to discriminate against workers or otherwise limit job opportunities, with some exceptions in cases involving workplace health and safety.

The administration, which last summer endorsed legislation to ban genetic discrimination in health insurance, issued a new study predicting a significant increase in the potential for misuse of genetic information. Although some critics have called such fears premature, the study describes some women as already rejecting genetic screening for the risk of breast cancer out of concern the results will be misused by employers or insurers.

A survey last year of more than 1,000 people by the non-profit National Center for Genome Resources in Santa Fe, N.M., found 65 percent said they would not take genetic tests for diseases if health insurers or employers would have access to the results. It said 85 percent said employers should be barred from obtaining information about an individual's genetic conditions, risks and predispositions.

A final thought on this question: There is no law requiring that employers provide insurance of any kind to their employees. Citing employer health benefits cost concerns to justify privacy intrusions, consequently, is irrelevant.

Objection 5: *The irrelevance of prevalence: As Justice Kennedy observed by the way of analogy in Treasury, (subsequently echoed by Justice Ginsberg in Vernonia), the fact that airport passenger screening almost never turns up weapons in no way negates the utility of the policy. Deterrence is often necessary—critical, even,—and cannot be evaluated solely by post-hoc empirical measures. Drug abuse prevalence might very*

well be considerably higher absent mandatory testing.

Invalid analogy, period. If you are a "false positive" at the airport metal detector, you or your carry-on baggage are quickly checked further to verify the error and you are sent on your way. Your name and other personal data are not recorded. Should you erroneously test positive for illicit drugs on the other hand, you are likely in for a protracted, aggravating, and expensive battle to clear your name—or to just obtain employment.

Moreover, Your Honors, the relative risks posed by illegal weapons aboard aircraft versus illegal drug metabolites in workers' specimens are utterly incomparable; the latter are on average trivial by comparison.

Justice Ginsberg made an additional interesting observation that merits comment. She opined that one could avoid airport screening by opting to eschew air travel. The clear implication is that one can avoid workplace drug screening by foregoing employment where testing is policy. Given that approximately 80% of major U.S. corporations conduct drug screening programs, those who object to suspicionless testing on principle find themselves increasingly boxed in, and one's capacity for ethical fortitude becomes a function of the depth of one's pockets as commercial labs aggressively market their services to virgin employment territory—abetted by politicians eager to posture as "tough on drug abuse" (recall Congressman Gerald Solomon, self-appointed drug war general and champion of the indiscriminate employment drug test).

Objection 6: *Your fastidious concern for privacy principle may be just fine on the ground and at home, but at 30,000 feet and 500 knots, the airline passenger has no need of a stoned flight crew.*

This is a staple argument of the suspicionless drug testing advocate. Well, one extreme (and remotely likely) example deserves its reciprocal. Yes, I'm a living-on-the-edge rogue airline pilot, always willing to risk years of expensive training, a prestigious job, and the lives of others (to say nothing of my own) just to get high when I'm due to fly. On the way to the airport, I smoke a joint and swig down some Quervo Gold. In the parking lot I do a line of cocaine and pop a barb to take the edge off, then head for the office where I provide a urine sample for my drug test. No problem; the drug metabolites have yet to appear in my excreta, and the assays do not even check for alcohol. I'm off to do my pre-flight and rev the engines.

Objection 7: *With respect to the private sector, your argument fails to take into account the utterly legal norm of "employment-at-will." Employers have the right to monitor you at will on the job, and terminate you for any reason, however arbitrary.*

Recently a Texas man was summarily terminated for wearing a Green Bay Packers shirt to work during the 1996 NFL playoffs. His boss and the great majority of his co-workers were Dallas Cowboys fans. Such constitutes an lamentable episode of "lose-lose" stupidity, and is, of course, bound for the courts, where issues of excessive worker monitoring and wrongful termination are yet to be definitively settled. Legal Scholar Laura B. Pincus, J.D. enumerates the crazy quilt of state legislation and contradictory case law rulings in a collaborative American Business Law Journal article However customary the practice of employment-at-will may be, it is incontrovertible that such does not provide employers total discretion in

matters of arbitrary surveillance and termination. Pincus and Trotter call for legislation that would at the very least upgrade private sector privacy protection to the equivalent of that enjoyed by public sector employees. These authors frame their case with four core assertions:

1. Private sector protection is clearly warranted in light of the frequency and extent of intrusions perpetrated by employers and other commercial snoopers.
2. The power of the modern business corporation over the individual citizen is every bit the equal of that of government.
3. International privacy regulations will require that the U.S. upgrade its privacy laws as international free trade becomes the commercial norm. We lag far behind other industrialized nations in this regard.
4. Federal legal recognition of private sector privacy rights will actually benefit multi-state firms by relieving them of the necessity to deal with the current patchwork of state and local privacy laws.[152]

While I agree with all of the foregoing, I would just add that they speak only to utilitarian and empirical issues; they fail to address the more fundamental historical basis for our very Bill of Rights as it pertains to privacy, as discussed in Chapter Five.

As alluded to above, issues of excessive private sector worker monitoring (including drug testing) have yet to be definitively settled at the federal judicial level. For example, could private employers actually forward positive drug test findings to the authorities? The relevant Supreme Court precedents—such as those

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[152] Laura B. Pincus & Clayton Trotter, *The Disparity Between Public and Private Sector Employee Privacy Protections: A Call for Legitimate Privacy Rights for Private Sector Workers,* American Business Law Journal, Vol. 33, 1995, pp. 51-89.

we have examined in Chapter Five—while contradictory to an extent and lacking in compellingly analogous case attributes, seem to indicate that, yes, employers could. Well, could private employers strip-search employees in search of drugs or other "contraband"? What are the Constitutional limits—if indeed there are any—on proactive private investigation of criminal (or any) conduct? What the majority deem "reasonable"? (By whose assessment? Surveys have from time to time indicated a majority sentiment for ripping up the obstructionist Bill of Rights in furtherance of law enforcement efficiency.)

Could the Disney Corporation require that both employees and paying customers wear the new drug-detecting skin patches (now coming into vogue for use on parole, probation, and clinically-remanded "substance abuser" populations) while on the premises? After all, Disney has a valuable market "interest" in providing its customers with a "wholesome, family-oriented, drug-free" environment. Similarly, could private apartment complexes or gated master-planned communities, eager to assure their market prospects of "safe and drug-free" habitats, require that renters or buyers submit to drug testing? Would such controversies not involve federal constitutional questions similar to other civil rights violations?

They certainly would. And perhaps the Court will have the good sense to adjudicate such issues in the spirit of Original Intent as so thoroughly examined by Cuddihy. Recall from *Boyd*: *Obsta Principiis*.

CHAPTER EIGHT

Conclusions

First, shall we "regress" for a moment? If we think of a hiring decision assessment as comparable to what statisticians call a logistic multiple regression analysis, the questionable predictive utility of a negative drug screen result becomes readily apparent. Let us first review briefly the essence of statistical regression techniques.

Regression analysis simply refers to mathematical techniques used to predict an outcome or "dependent" variable from one or more independent variables. Recall from Algebra 101 the simplest general form of a mathematical "function" where $y = ax + b$. We call such a "deterministic" function in that y is "exactly" determined from values associated with x ("a" being the coefficient of "x" and "b" the y-intercept). The "probabilistic" function is similarly expressed in its simplest form as $y = ax + b \pm e$, where "e" is some "error factor." (A confusing term of art, "error" in this context implies inherent phenomenal variability, not "mistake" or "blunder.")

Multiple regression merely adds into the equation additional independent ("x") variables that one hopes will minimize the error term ("e") and improve our predictive ability. For example: If I know your height, can I guess your weight?

Well, yes, but if I also know your age, sex, waist size, shoe size, hat size, body fat ratio, and so forth, I am much better able to calculate your weight more accurately. Each additional "x" variable adds predictive power in excess of the sampling variability it also contributes to the analysis.

Logistic regression is merely one where "y," the outcome variable, is expressed as a percentage. Widely used, for example, in health care for projected mortality estimation where statistical models are derived to predict expected death rates given a particular mix of independent factors, in such equations the "y" variable is the proportion of patients expected to die, say, during a hospital stay, or within a specified length of time.

A hiring decision-maker is subjectively performing the functional equivalent of a multiple logistic regression analysis. The dependent variable "y" can be expressed as "p(s)", the probability of a successful hire, where "success" means that the candidate will turn out to be an effective employee—a worthy, value-adding hire. So then, as a general logistic expression we can state that:

$$p(s) = a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5 + a_6x_6 + a_7x_7 + a_8x_8 + a_9x_9 + \ldots + a_nx_n \pm e$$

where perhaps

a_1x_1 = high school record

a_2x_2 = undergraduate record

a_3x_3 = graduate school record

a_4x_4 = additional training and/or certifications

a_5x_5 = prior employment

a_6x_6 = prior employment

a_7x_7 = prior employment

a_8x_8 = references

a_9x_9 = interview evaluation [Note: "a" is the "regression coefficient" for each independent variable.]

and so forth (however operationalized.[153]) on out to "a_nx_n," which we will posit as our drug screen result, where 0 = "negative" and 1 = "positive" (statisticians call this type of dichotomous indicator a "dummy" variable). Our employment decision-

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[153] Building such a regression model (not to mention even acquiring sufficient representative, stratified, and blinded data in the first place) would be fraught with research and measurement difficulties worthy of an additional thesis. With respect to educational records, would we use the raw GPA, or one weighted for difficulty of major and/or "quality" of institution(s). What of prior employment? On advice of counsel, most previous employers are tight-lipped regarding the quality of former employees' tenures (an obstacle that has spawned a gray-market industry of surreptitious background-check data harvesters). Can we infer previous performance success from a confluence of indirect measures such as length of employment, salary level, and/or reputation of prior employers, etc.? What type of consistent metric might we derive to assess personal and professional references? Is p(s) merely a linear function of the independent variables? Curvilinear? Loglinear? Non-linear? Difficult questions, all.

Moreover, the most difficult aspect of all would be neither the operational definitions of independent variables nor a viable aggregate mathematical model structure, but the very acquisition of empirical employment data wherein subjects across strata had been evaluated as successful despite a positive drug test result in their employment histories; If you test positive, you are not even hired, or, if already on the job, you are usually fired or coercively remanded to "treatment" and summarily branded as a "problem" employee. Such renders objective research in this area problematic. Our theories concerning "drug addiction" in general suffer from this built-in bias; one cannot randomly select normal human subjects to sort into experimental and control groups, with experimental cohorts dosed with illicit drugs for sustained periods to observe addiction effects. Consequently, our observations concerning addiction derive from clinical problem sub-populations, leaving us with an inherent generalizability limitation.

maker is interested in an outcome as close to 1.0 as possible, and seeks permissible pre-employment data that maximize p(s), the probability of making a good hire.

A variety of unknowns confound the quest for p(s) = 1.0, i.e., the perfect hiring decision. A stellar set of academic GPAs, excellent work history, laudatory references and so on, do not guarantee future job success; some factors are just inherently unknowable in advance. Actuarial probabilities also slightly reduce p(s); the employee might be run down by a truck three months hence, or be diagnosed with a previously undetected fatal or otherwise debilitating malady (genetic testing may change this, however: see below). Moreover, some data elements' inclusion are proscribed by law, at least in theory. Under Title VII, race, national origin, religion, gender, age, political affiliation and other non job-related data are also among those disallowed. The Target discount store chain, for example, was successfully sued several years ago over its use of the MMPI (Minnesota Multiphasic Personality Inventory) in assessing employment candidates' "character." The MMPI is a clinical diagnostic instrument appropriate only for the evaluation of psychopathology in *clinical* settings.[154]

But what about the drug screen (x_n)? Surely, sobriety is a relevant employment factor, is it not? One obviously cannot disagree with that, but here is where things get interesting. Let us put aside for the moment the issue of whether a positive drug test always provides dispositive evidence of employment undesirability. Of

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[154] See *Soroka v. Dayton Hudson Corp.*, No. AO52157, 10-25-91. See also *Getting Personal*, ABA Journal, Vol.78, Jan.1992, pp.66-67.

necessity, we stipulate that motorists testing "positive" for DWI (usually defined as >0.10% blood alcohol concentration) are, in the aggregate, temporarily mechanically incompetent and unacceptably dangerous to others. Is a positive employment drug test always equivalently dispositive evidence of employment incompetence or otherwise prohibitive hiring liability? While I rather doubt it, I am more interested in the value of the "negative" drug test and its role as a decisive employment criterion.

The central question: Is a negative employment drug screen result invariably sufficiently important and accurate to confer upon it the primary determinant status Title VII and good judgment demand?

No, it is not. Why? A conventional regression analysis method statisticians routinely use is that of the "backward stepwise" iterative procedure, in which data for all independent variables are included in a tentative model expression and then assessed and eliminated if necessary one-by-one until all remaining predictors are above a pre-determined predictive "significance level." Variables falling below the significance threshold given the presence of the other "significant" predictors are discarded on each successive evaluation until an equation containing only sufficiently significant predictors remain. Our goal, remember, is to arrive at a mechanism with optimal predictive power, one that maximizes p(s), one that yields the smallest error term.

It is my contention that our drug screen dummy variable x_n would be discarded by the stepwise regression procedure for nearly all employment strata were we able

to acquire the requisite data and run the numbers. A binary (0/1) x_n pales in predictive power aside more finely calibrated (and relevant) directly job-related predictors. Consider that x_n is itself highly correlated with the other, more powerful elements: the probability of testing positive is inversely proportional to the training and skill levels reflected in the remainder of employees' resumes. Drug use is not randomly distributed throughout the workforce.

In this sense, a negative x_n is overwhelmingly redundant: it adds no new information where the applicant brings verifiable, job-related information to the evaluation. Yet we continue to assign it "controlling force" in employment, in direct contravention of Title VII requirements and common sense. One more simplistic triumph of symbol over substance.

One might legitimately object, however, about the qualifier "verifiable, job-related information." What about the transient, low-skilled sector wherein workers often encounter strenuous, dirty, and dangerous assignments and bring little in the way of verifiable work history documentation to the hiring process? Such is indeed a valid objection, particularly since such employment sectors also tend to be those with higher drug use prevalence. But, if we think in terms of a labor continuum from the highly educated and credentialed employee to the unskilled, undocumented day-laborer, we cannot but guess at where to draw the line from a purely utilitarian cost/benefit perspective, given the highly suspect quality of the available data. We *can*, on the other hand, be certain that those "below the line" will feel unfairly singled out.

Moreover, as stated previously, the high prevalence strata were long-ago consigned to testing. Testing vendors, desperate for revenue and market share in a tight-fisted low-bid environment, increasingly purvey "a solution in search of a problem" in pitching their services to ever-lower prevalence employment sectors. It is perhaps telling that, when apologists for surveillance vendors are challenged on empirical necessity grounds, the ad hominem *what-have-you-to-hide* adverse inference weapon is reflexively brandished.

Reciprocity failure

If an employer is justified in coercing a worker to abstain from potentially harmful indulgences such as illicit drug use on health, safety, and productivity grounds, would not then the reciprocal of such be justified? Could an employer's interest in optimal worker utility justify requiring that employees *partake* of activities or substances with output-enhancing potential?

Nicholas J. Caste poses just such questions in *Drug Testing and Productivity*:

> One of the justifications for the mandatory drug testing of employees is the negative effect which drug use is said to have on employee productivity . . . Since productivity is negatively affected by the use of drugs the employer is seen to have the right to discourage their use by the imposition of sanctions including outright dismissal . . . I will argue that the acceptance of the "productivity argument" commits one logically to consequences which would be morally repugnant to many of its supporters . . .
>
> The productivity argument essentially states that since the employer has purchased the employee's time, the employer has a proprietary right to ensure that the time purchased is used as efficiently and productively as possible. Since it is the employee's *time* that is purchased rather than a finished product (as would be the case with independent contractors) the employer must be concerned with

> "contract enforcement" and must attempt somehow to motivate the employee to attain maximal production capacity. In the case of drug testing, the abuse of drugs by employees is seen as diminishing their productive capacity and is thus subject to the control of the employer . . .
>
> The productivity argument thus seems to allow the employer the "right" to manipulate employees and to interfere with those aspects of their lives which affect production. But the argument if taken to its logical conclusion yields too much.[155]

Caste proposes a "simple thought experiment" involving the use of two hypothetical drugs, "Hedonine" and "Pononine." Both of which are proven to be without health risks and both of which can be shown to enhance productivity. Hedonine is a euphorant, while Pononine—though equal in productivity enhancing effect—produces painful but otherwise harmless transient side-effects. Pononine is in fact the polar opposite of the common illicit drugs against which employers screen—drugs which provide transient pleasure while allegedly compromising employee health and productivity.

Caste points out that the productivity rationale legitimating coercive action against illicit drug consumption, when taken to its inevitable end, forces us to logically conclude that partaking of drugs such as Hedonine or Pononine could indeed be required as a condition of employment.

Step outside the "thought experiment" and consider some propositions much less theoretical and much more likely to come into actual dispute. Many employers currently offer inducements such as health club memberships to encourage

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[155] Nicholas J. Caste, *Drug Testing and Productivity* Journal of Business Ethics, Vol. 11, 1992, pp. 301-303.

employees to improve and maintain their health, but one doubts that routine health club participation could be made a condition of employment absent optimal physical condition as a direct job requirement. Another hypothetical, one a bit closer to Caste's thought experiment: If optimal "mental" capabilities are the requisite job attributes, could employers require—via Hedonine/Pononine logic—that employees take daily dietary supplements such as St. Johns Wort (sometimes called "natural Prozac") and Ginko Biloba? Both are thought to improve mental functioning without any damaging side-effects. Just what are the acceptable ethical limits of employer control over the personal life of the employee in pursuit of maximal productivity?

Finally, a point that Caste failed to address entirely: What if the employer's star performer—the most reliable, productive, and apparently the healthiest and happiest employee in the office—tests positive for illicit drug use? Terminate him? Remand her to "treatment"? Treatment of what—besides her apparent "bad" attitude toward legal authority. It is a recurrent source of consternation among employers and co-workers when the "good" employee turns up positive. As Elinore Schroeder pointed out in the Kansas Law Review:

> Presumably, current employees who test positive on a random or blanket drug screen have been performing at a satisfactory level; otherwise the employer would already have disciplined them . . . more than one management lawyer has received a call from a client asking, " Our best worker has just tested positive. Do we have to fire him?"[156]

"We never even suspected he had a drug problem."

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[156] Elinore P. Schroeder, *On Beyond Drug Testing: Employee Testing and the Quest for the Perfect Worker*, Kansas Law Review, Vol. 36, 1988, p. 874.

Maybe he didn't.

Two management worldviews

No one can argue against the goals of safe and productive enterprise. Disputes are about causes of danger and loss, and choices with respect to effective remedies. Those who attribute causal factors of suboptimal workplaces to the dissolute character of the employees will naturally be among those who favor top-down, autocratic management, and its tactical corollary, surveillance ("Taylorism," i.e., "Theory-X," which posits a negative view of worker motivation and morals[157]).

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[157] Frederick Winslow Taylor's 1911 book The Principles of Scientific Mangement (New York, W.W. Norton & Co., Inc, 1967) was for decades considered "The Bible" of commercial management theory. Among his fundamental postulates: "surveil and coerce," for he viewed the working classes cynically, insisting that most employees malinger whenever possible. An excerpt from his book illustrates his view:

"..The English and American peoples are the greatest sportsmen in the world. Whenever an American workman plays baseball, or an English workman plays cricket, it is safe to say that he strains every nerve to secure victory for his side. He does his very

best to make the largest possible number of runs. The universal sentiment is so strong that any man who fails to give out all there is in him in sport is branded as a 'quitter,' and treated with contempt by those who are around him.

"When the same workman returns to work on the following day, instead of using every effort to turn out the largest possible amount of work, in a majority of the cases this man deliberately plans to do as little as he safely can—to turn out far less work than he is well able to do—in many instances to do not more than one-third to one-half of a proper day's work. And in fact if he were to do his best to turn out his largest possible day's work, he would be abused by his fellow-workers for so doing, even more than if he had proved himself a 'quitter' in sport. Underworking, that is, deliberately working slowly so as to avoid doing

a full day's work, 'soldiering,' as it is called in this country, 'hanging it out,' as it is called in England, 'ca canae,' as it is called in Scotland, is almost universal in industrial establishments, and prevails also to a large extent in the building trades; and the writer

Those, on the other hand, for whom organizational systems themselves are the primary source of trouble, see the issue more in terms of cooperative empowerment—a philosophy associated with the views of psychologist Abraham Maslow ("Theory-Y," in which individuals are seen to be overwhelmingly predisposed to want to succeed, i.e. the innate human drive toward "self-actualization"). This latter model forms the core of the theory and practice of "TQM" (Total Quality Management) and its tactical corollary "CQI" (Continuous Quality Improvement).[158]

Dilbert Zone™ lampooning notwithstanding, evidence of plant-floor and service organization effectiveness of the TQM/CQI model is compelling. John Gilliom once again:

> Evidence presented by Noble (1986) suggests that empowered employees who have the authority to truly participate in all key aspects of workplace management may be the best long-term solution to the safety problem. If that is the case, then top-down disciplinary policies that bypass and displace worker control may actually work against safety . . .
>
> Noble's comparative analysis suggests that safety programs that empower workers rather than exclude them . . . more strongly serve safety interests because monitoring is in the hands of the workers

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asserts without fear of contradiction that this constitutes to be greatest evil with which the working people of both England and America are now afflicted . . . " (Internet source: [http://www.tiac.net/users/eldred/fwt/t1.html], March, 1998.)

[158] Dr. W. Edwards Deming is regarded by many as the "father of TQM." His basic view of management is often summarized as "fix the process, not the blame." Dr. Deming's seminal book on management theory is Out of the Crisis (Cambridge, MA, Massachusetts Institute of Technology Center for Advanced Engineering Study, 1982). Much of Dr. Deming's work is available on the internet at [http://www.caes-mit.edu/products/deming/]

rather than a vulnerable and politicized government bureau.[159]

A consulting firm known as The Reliability Group conducted a longitudinal study beginning in the mid-1980's focusing on safety and operating reliability issues among major U.S. manufacturers. Their report, *How To Insure Success in Safety and Operating Reliability* (1997), makes for instructive reading:

> Since the mid-1980's, The Reliability Group has conducted client studies within Fortune 100 organizations designed to identify the true causes of industrial accidents, injuries, and unreliable events. Safety performance and operating reliability result from the complex interaction of factors such as supervisory style, job design, communications, and group norms & expectations (the organizational culture). Employees can deliver incredible results if given the opportunity: one client reduced both accident frequency and severity by over 80% within a three year period.
>
> The Human Systems Reliability Survey is a comprehensive examination of factors that have exhibited a strong relationship to the occurrence of accidents in the workplace. The survey measures organizational variables (such as management's commitment to safety, degree of vertical communication, and organizational culture), work group characteristics (such as cooperation/teamwork, cross-job knowledge, and the degree of safety emphasis), physical and ambient characteristics of the workplace (such as physical conditions, degree of stress, and the quality & appropriateness of equipment), job-level variables (such as job autonomy, task/skill variety, and job satisfaction), and safety-related factors (incidence of "near misses" or "close calls", accident investigation procedures, and employee recognition). Altogether, 120 variables are measured. Employees are asked to anonymously complete a written questionnaire. Respondents who experienced accidents (within the last three years) were compared to those who had not along all the variables measured. Discriminant analysis, a statistical procedure that forms linear combinations of independent variables, was used to identify the
>
> Survey measures that most accurately classified respondents into the two groups (i.e., those who has experienced accidents versus those who had not). The variables that were identified as the best "predictors" were then examined further through analysis of various

[159] Gilliom op cit., p. 46.

> procedures. That is, the mean scores along these variables for those who had experienced accidents were compared to the mean scores for those who had not, and the significance of the differences tested through the use of the F statistic.

Among the conclusions of The Reliability Group investigations:

> Organizations that allow workers more control over their job environment are significantly more have a safer workplace than those who retain control at the top. In a one-year study of 30 manufacturing organizations conducted with a major international insurance company, researchers found that lower loss organizations typically allow employees greater control over their speed of work, the timing of breaks, and how they do their jobs. In addition, researchers found that work groups within safer organizations were given sufficient autonomy and authority to make necessary decisions.
>
> A predictive model developed by Reliability Group consultants correctly classified 95% of the organizations into "high" and " low" loss categories based on measurements of both human and workplace factors. The data suggests that the accuracy of loss predictions can be greatly enhanced through the consideration of human factors. According to Reliability Group President Hank Sarkis, organizations can improve loss ratios by emphasizing the development of human factors strongly related to safety. "This study reinforced prior findings that humanistic, people-centered organizations that place a high priority on constructive interpersonal relationships often have superior safety records," he remarked.

Noteworthy in this report is the absence of *any* mention of drug testing.[160]

Internationally-renowned management consultant Tom Peters (author of the book and PBS series In Search of Excellence) echoes the foregoing sentiments in rather, well, colorfully unequivocal language:

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[160] The full 1997 Reliability Group report is available on the internet at [http://www.quality.org/TQM-MSI/hdsqual.pdf]. Also, an enormous breadth of progressive quality management resources are available at the websites of Quality.org [http://www.quality.org] and ASQ, the American Society for Quality [http://www.asq.org].

> Q: What's your reaction to the widespread use of drug testing as a condition of employment and random testing as a condition of continued employment?
>
> A: Utter, unadulterated rubbish! . . . Put aside productivity problems and safety issues. Let's talk about what makes any business tick: Super folks who trust one another, care about one another, and are committed to working hard together to create great outcomes for each other—and their customers.
>
> Trust. Respect. Commitment. Mutual support. Each is wholly at odds with intrusive, impersonal assessment measures. That is, drug tests. (And, to my mind, canned psychological assessment tests; and secret snooping on telemarketers et al; and, heaven knows, lie detector tests.) . . .
>
> No, I'm not pissing in no bottle. And nobody who works for me is going to be forced to do so either. And if there were a law that required me to ask them to do it, I'd close my place down before I'd comply.
>
> If you want an environment of trust, care, compassion—which is the only kind of environment that will lead to trust, care, and compassion for customers—then stay the hell out of people's personal lives.[161]

A closing observation regarding the safety and productivity issue: A recent darling of the pro-business, anti-regulatory political constituency is Philip K. Howard, author of the best-selling book The Death of Common Sense: How Law is Suffocating America.[162] While some view Mr. Howard a bit cynically as an articulate right-wing equal-opportunity bureaucrat basher (albeit one with a special zest for OSHA-baiting), a core element of his argument is quite in accord with the findings of organizational "empowerment" advocates such as those sampled above. For Philip Howard, industrial safety is emphatically not enhanced by the mindless zeal of

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[161] Tom Peters, The Pursuit of Wow! every person's guide to topsy-turvy times, (Vintage Books, NY, 1994), pp. 88-90.

[162] Philip K. Howard, The Death of Common Sense: How Law is Suffocating America, (New York, Random House, 1994).

otherwise detached government inspectors who issue costly citations over safety railings out of spec by a fraction of an inch. Tangible results come from those "closest to the bone," working in harmonious rather than adversarial environments wherein is cultivated an ethos of mutual respect and concern—and shared enterprise vision.

And such requires more leaders and fewer spies.

One last point here: As John Gilliom so astutely observed, it is no small hypocrisy that the business community so eager to buy into the suspicionless drug testing proposition is the very same executive cohort that never passes up an opportunity to otherwise angrily inveigh against and lobby against industrial health and safety legislation and regulations.[163]

A second "thought experiment"

Let us consider another scenario. It is also fashionable of late in progressive management theory circles to insist that employers cease viewing labor as "overhead" and instead regard workers as "capital assets." The concept has considerable appeal and ostensible merit, but begs what should be an obvious question. Employers clearly want to verify the wisdom of their labor "investments" by a variety of methods, drug testing being but one. A basic appeal of employment drug screening is its relative economy as an inferential index of employee "health"

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[163] Gilliom, op cit., p. 43.

and "character." But, what if cost is of no account? Where then do we (can we?) draw the line on the proper extent of employee scrutiny?

Imagine that you are William Cates, Chairman of the info-tech leading Macrosoft, and you are intent on hiring ("investing in") a key executive operative who is to be groomed to assume the corporate reins upon your retirement. The choice is critical because—popular notions regarding your vast wealth notwithstanding—the overwhelming bulk of your net worth is not liquid and is tightly coupled to the value of Macrosoft stock. The long-term worth of your estate will be determined in large measure by the long-term effectiveness of your successor.

After much winnowing you now have a short list of three distinguished candidates with essentially identical inventories of education, experience, skills, and accomplishments. A deciding criterion will be the relative "health" of the finalists—and prudence dictates that you construe the term "health" quite broadly. You require, therefore, that your finalists submit to comprehensive evaluations that include not only drug screens and complete "conventional" physicals, but also clinical exams extending to EEGs, CAT-scans, MRIs, bone scans, colonoscopies, and genetic tests. Moreover, your aversion to any potential boardroom "character" unpleasantness dictates that your candidates also submit to thorough background investigations and psychopathology assessments such as the MMPI (Minnesota Multiphasic Personality Inventory) and handwriting analysis. The sum of the invoices for these services will come to a mere $30,000 or so, pocket change for

Macrosoft, and well worth the expense in light of the stakes for the company you founded and the equity that will underwrite your anticipated lengthy and comfortable retirement.

Finally, the winner of this "heir apparent" competition will be required to sign an employment agreement containing lifestyle restrictions similar to those agreed to by NASA astronauts: no "risky" off-the-job activities countenanced whatsoever. Given the lavish compensation accorded the eventual hire and the fundamentally "job-relatedness" of all of the foregoing (in your estimation), your private-sector market interest is compelling. Those who demur can take their vexed privacy sensibilities elsewhere. These platinum handcuffs are, in your best business judgment (and who can question *that*, in light of your long-dominant industry position), essential.

You are utterly unencumbered with respect to such tactics by the logical end of Justice Ginsberg's "Fourth Amendment does not apply to the private sector" declaration in *Chandler* and the consequent "we-have-our-own-laws-at-Disneyland" commercial worldview, are you not? If *not*, then how and by whom are the limits to employer investigatory discretion and lifestyle control to be established?

Ultimately, by the Constitution and the Supreme Court of the United States acting on behalf of a free people, that's how and by whom.

Common Knowledge

Just as it is "common knowledge" among drug warriors and their supporters that—again—"10% of all American babies are born addicted to drugs," that there are "500,000 drug-related emergency room visits a year," that "1 in 6 U.S. workers has a drug problem"—and so on, it is also "common knowledge" that the laboratory rat in the experimental cage will press the bar that delivers the dose of cocaine until he or she dies or lapses into unconsciousness. We've all heard this, correct?

Well, perhaps yet another psycho-social urban myth is afoot. In the scholarly journal Common Knowledge comes a monograph entitled *Drugs: In the Care of the Self*. This lengthy and thoughtful essay dismantles one widely held drug abuse myth after another. With respect to our friend the lab rat:

> Not only are drug use and drug addiction contingent occurrences, dependent on the user's life history, but these occurrences, appearances aside, are not drug centered. Despite reports in the 1960's and 1970's of laboratory animals overdosing on psychostimulants under conditions of general impoverishment but of unlimited access to drugs, more recent studies of rats, primates, and humans have effectively shown that high levels of drug seeking and drug taking can be reduced, or even eliminated, when alternative activities are introduced. Laboratory studies have moreover demonstrated that drug taking can even be prevented by enriching an environment with non-drug activities prior to making a drug available. A behavioral pharmacologist who studies these effects with reference to cocaine summarized them in observing that "although current rhetoric would often have one believe otherwise . . . the self-administration of cocaine is governed by the same laws that govern behaviour maintained by other positive reinforcers." In other words, "the reinforcing effect of cocaine is the result of an interaction

between a drug, and organism, and an environment.[164]

It will be unfortunate if drug warriors of the William J. Bennett camp choose to cling to their Just-Say-No,-Or-Else "bootstrap morality" drug policy model and continue to dismiss such as the above as mere "liberal 'environmental root causes' baloney." DeGrandpre and White's observations on the pharmacological, intra- and interpersonal matrices that characterize drug-related behavior from abstinence through addiction are backed up by a breadth of current clinical literature that emphasizes the relevance of personal and social values as key factors in intoxication issues. A literature search quickly returns recent titles such as

- *Critical Analysis of Drug War Alternatives: The Need for a Shift in Personal and Social Values*, Linda S. Wong, The Journal of Drug Issues, Vol. 20, No. 4, 1990, pp. 679-688.
- *A Values Approach to Addiction: Drug Policy that is Moral Rather Than Moralistic*, Stanton Peele, The Journal of Drug Issues, Vol. 20, No. 4, 1990, pp. 639-646.
- *Prepubertal Sons of Substance Abusers: Influences of Parental and Familial Substance Abuse on Behavioral Disposition, IQ, and School Achievement*, Moss, Vanyukov, Majumder, Kirischi, and Tarter, Addictive Behaviors, Vol. 20, No. 1, 1990, pp. 345-358.
- *The Effects of Family Structure and Family Relations on Adolescent Marijuana Use*, The International Journal of the Addictions, Vol. 30, No. 10, 1995, pp. 1207-41.
- *A Moral Vision of Addiction: How People's Values Determine Whether They Become and Remain Addicts*, Stanton Peele, The Journal of Drug Issues, Vol. 17, No. 2, 1987, pp. 187-215.

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[164] R.J. DeGrandpre and Ed White, *Drugs: In the Care of the Self*, Common Knowledge, (Winter 1996, Vol. 5, No. 3), pp. 31-32.

In *A Moral Vision of Addiction*, for example, Peele succinctly examines the history of our clinical ambivalence with respect to values discussion in the area of addiction:

> The scientific study of addiction has strongly opposed value considerations in addiction, regarding these as remnants of an outdated, religious-moral model. Behavior therapists, experimental psychologists, and sociologists hold this view in common with disease theorists who have championed the idea that a moral perspective oppresses the addict and impedes progress toward a solution for alcoholism and addiction. Many social scientists and others, however, believe the disease approach actually is just another form of the moral model, and that "the acceptance of the 'disease' concept . . . [has] covertly intensified rigid moralizing" (Fingarette, 1985:60). It has accomplished this by embodying the evil of addiction in the use of the substance—in any use of such drugs as cocaine and in any kind of drinking by those with alcohol problems—and by urging abstinence as if it represented a modern scientific and therapeutic invention.
>
> Nonetheless, the aim of "demoralizing" addiction retains a strong appeal for liberal observers and for social and behavioral scientists. In fact, social researchers frequently bemoan the strong tendencies for both general populations and treatment personnel to continue to see addiction in moral terms even as most people ostensibly endorse the fashionable model view of addiction as a disease (Orcutt et al., 1980; Tournier, 1985). In other words, as scientists, they wish to stamp out entirely people's continuing tendency to regard addiction as a reflection of the addict's moral qualities and to hold people responsible for addictive behavior. The view of the present paper, on the other hand, is that appetitive behavior of all types is crucially influenced by people's pre-existing values, and that the best way to combat addiction both for the individual and the society is to inculcate values that are incompatible with addiction and with drug—and alcohol—induced misbehavior.[165]

Peele's paper reviews and analyzes cultural differences revealing the range of intemperance with respect to alcohol and other "drugs of abuse" seen across human

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[165] Stanton Peele, *A Moral Vision of Addiction: How People's Values Determine Whether They Become and Remain Addicts*, The Journal of Drug Issues, Vol. 17, No. 2, 1987, p. 188.

social, religious, and political groups. His conclusion? A call for values emphasis and moral education that would certainly receive approving nods from William Bennett:

> The issue is not only to get through to the large numbers of the young who seem not to be hearing us, but to establish bedrock moral principles for our society. As it is, we seem to be falling further behind in creating a moral environment in which we want to live, and in giving children a set of values that are adequate for such a world. Some of the values we need more of, as outlined in this paper, are values toward health, moderation, and self-control; achievement, work, and constructive activity; larger purposes and goals in life; social consciousness, concern for the community, respect for other people, and mutuality in human relationships; intellectual and self-awareness; and acceptance of personal responsibility for our actions. These are the value choices that confront all of us, and not just drug users.[166]

The monographs cited above all report on the importance of environmental and interpersonal influences (i.e., "moral education") on the formation and maintenance of the internalized value systems that drive drug-seeking behaviors. Psycho-social clinical researchers have come a long way from the decades-ago period when "moral neutrality" seemed to hold sway in applied psychosocial investigation. Yet too many of our leading national "morality" advocates such as Dr. Bennett continue to reject or ignore these journals as purveyors of "pro-drug psychobabble" when the works therein actually support many of the "traditional family values" principles Bennett and his conservative policy kin espouse. Even the hard-line "Our-Right-to-Drugs" polemicist Thomas Szasz cites the 1791 words of Edmund Burke in the overleaf of his 1985 book Ceremonial Chemistry:

> Men are qualified for civil liberty in exact proportion to their disposition to put moral chains upon their own appetites; in

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[166] Peele, op cit., p. 210.

> proportion as their love of justice is above their rapacity; in proportion as their soundness and sobriety of understanding is above their vanity and presumption; in proportion as they are more disposed to listen to the counsel of the wise and good, in preference to the flattery of knaves. Society cannot exist unless a controlling power upon will and appetite be placed somewhere, and the less of it there is within, the more there must be without. It is ordained in the eternal constitution of things, that men of intemperate minds cannot be free. Their passions forge their fetters.[167]

A perhaps curious citation, given Dr. Szasz's uncompromising stance concerning what he asserts to be one's inalienable right to "self-medicate" for whatever reason without the oversight or intervention of what he disapprovingly refers to as "the therapeutic state." However, in Ceremonial Chemistry and his later work Our Right to Drugs, Dr. Szasz argues forcefully in favor of personal autonomy and concomitant individual accountability. Echoing a very Aristotelian sentiment in emphatically pointing out that arguing for a right to take drugs is not tantamount to advocacy of self-intoxication, Szasz opines that

> Emerson has put it perfectly: "We gain the strength of the temptation we resist." By acquiring self-control, man frees himself from the laws of reflexive subjection to needs, pleasures, and temptations."[168]

The refrain of Aristotle's Nichomachean Ethics rings clear from these words of Burke, Emerson, And Szasz:

> . . . praise or blame depends on whether or not a man successfully resists compulsion [NE 1110b] . . . the appetitive element in us must

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[167] Thomas S. Szasz, Ceremonial Chemistry: The Ritual Persecution of Drugs, Addicts, and Pushers, (Holmes Beach, FL., Learning Publications, Inc., 1985).

[168] Szasz, op cit., p. 157.

> be guided by the bidding of reason. Consequently, the appetitive element of a self-controlled man must be in harmony with the guidance of reason. For the aim of both his appetite and his reason is to do what is noble. The appetite of a self-controlled man is directed at the right objects, in the right way, and at the right time; and this is what reason prescribes. [NE 1119b15][169]

Perhaps Dr. Bennett's antipathy has something to do with the fact that these types of research findings and moral observations also tend to provide modern empirical and historical philosophical validation for the argument of John Stuart Mill in Chapter IV of his seminal work On Liberty—*Of The Limits To The Authority Of Society Over The Individual.* Mill had scant sympathy for or patience with a political/social order that would readily resort to coercion while failing its offspring in their moral development.

Recall, from Chapter 1 of this thesis and Dan Baum's Smoke and Mirrors that, for Dr. Bennett and his colleagues, however, the primacy of "Authority" over the individual is beyond dispute or diminution.

To which Mill would reply:

> . . . I am the last person to undervalue the self-regarding virtues; they are only second in importance, if even second, to the social. It is equally the business of education to cultivate both. But even education works by conviction and persuasion as well as by compulsion, and it is by the former only that, when the period of education is past, the self-regarding virtues should be inculcated. Human beings owe to each other help to distinguish the better from the worse, and encouragement to choose the former and avoid the latter. They should be forever stimulating each other to increased exercise of their higher faculties, and increased direction of their feelings and aims towards wise instead of foolish, elevating instead of

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[169] Aristotle, Nicomachean Ethics, Translated by Martin Ostwald, (New York, MacMillan Publishing Company, 1962).

> degrading, objects and contemplations. But neither one person, nor any number of persons, is warranted in saying to another human creature of ripe years, that he shall not do with his life for his own benefit what he chooses to do with it. He is the person most interested in his own well-being, the interest which any other person, except in cases of strong personal attachment, can have in it, is trifling, compared with that which he himself has: the interest which society has in him individually (except as to his conduct to others) is fractional, and altogether indirect: while, with respect to his own feelings and circumstances, the most ordinary man or woman has means of knowledge immeasurably surpassing those that can be possessed by any one else. The interference of society to overrule his judgment and purposes in what only regards himself, must be grounded on general presumptions: which may be altogether wrong, and even if right, are as likely as not to be misapplied to individual cases, by persons no better acquainted with the circumstances of such cases than those are who look at them merely from with- out. In this department, therefore, of human affairs, Individuality has its proper field of action. In the conduct of human beings towards one another, it is necessary that general rules should for the most part be observed, in order that people may know what they have to expect; but in each person's own concerns, his individual spontaneity is entitled to free exercise. Considerations to aid his judgment, exhortations to strengthen his will, may be offered to him, even obtruded on him, by others; but he, himself, is the final judge. All errors which he is likely to commit against advice and warning, are far outweighed by the evil of allowing others to constrain him to what they deem his good.[170]

It is worth noting again, in light of the foregoing Mill quote, that this thesis is *not* a defense of recreational intoxication, whether of the legal or illegal variety. I fully concur that we "owe to each other help to distinguish the better from the worse." This thesis does not argue that drug use is wise, nor does it argue that all social and sanctions pertaining thereto are ethically invalid. This thesis likewise does not argue that all preventive measures are beyond the moral pale. It *does*, on the other hand, insist that the indiscriminate surveillance state *is* beyond the

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[170] John Stuart Mill, op cit., pp. 76-7.

pale—that the upright and healthy moral order we seek requires considerably more sustained and intelligent effort than our policymakers seem willing to provide where "drug abuse" is concerned.

Policy recommendation

Given the moral, legal, and utilitarian shortcomings of current suspionless drug testing policies, we might consider alternatives similar to the one hypothesized below—one that is at once strict, rational, and ethical:

HypoThetical Corporation substance abuse policy statement

> Congratulations on your succcessful hiring evaluation, and welcome to our company. We need and welcome your skills and your energy, and we anticipate a mutually rewarding association with you. The following is to familiarize you with our corporate substance abuse policy.
>
> HypoThetical Corporation (HTC) supports the goals of a drug-free workplace, namely those of a healthy, safe, and productive business environment. When you agree to employment with us you agree to the substance abuse policy contained herein. This policy complies with and exceeds the requirements of the federal Drug-Free Workplace Act of 1988. You will not, however, be asked to submit to a pre-employment drug screen as a condition of employment, as the 1988 Act does not require it, and we regard such testing as a waste of resources that commences our relationship in bad faith. Additionally, we do not conduct random nor otherwise indiscriminate illicit drug and/or alcohol testing. We do, however, expect all employees to refrain from consumption of intoxicants in a manner that results in documentable adverse impact on job performance. In addition to poor personal performance, adverse impact includes impairment that puts other individuals at risk of death or injury or results in damage or clear risk of damage to company property.
>
> In accepting employment with HTC, you agree to the following:
>
> Use of intoxicants on company property during work hours, including alcohol or tobacco products, non-medical use of prescription drugs or other psychoactive chemicals (e.g., inhalants), and all illegal

drugs is expresssly prohibited. Violation of this policy element is cause for immediate termination. Additionally, evidence of onsite employee use of illegal drugs shall be turned over to the authorities for prosecution.

Any employee found to be under the influence of intoxicants during work hours, even if the consumption of the intoxicant(s) occured during non-work time, is likewise subject to immediate termination. "Under the influence" shall be assessed by a competent medical provider according to accepted clinical criteria.

HTC expressly reserves the right to test employees for intoxicant use in the event of reasonable cause as determined by management personnel. Reasonable cause shall be defined as those circumstances in which an employee is visibly impaired, has been observed to be consuming or in possession of intoxicants on the premises or its immediate environs, or has been involved in an on-the-job accident resulting in physical injury, damage to workplace property or clear danger of such injury or loss.

In light of the potential severity of sanctions in the wake of a positive test result, the company shall do everything possible to preclude the possibility of false accusation. Consequently, HTC substance abuse testing shall be performed in accordance with evidentiary (i.e. "forensic") standards at a laboratory independently certified as performing to such accuracy and precision criteria.

A positive test for intoxicants in the wake of a loss incident is regarded as a rebuttable presumption of proximate cause and may additionally result in civil liability action. Anyone testing positive under the provisions of this policy, however, retains the right of review of and challenge to the laboratory results.

All events involving invokation of "for cause" testing shall be reviewed by senior management, with employees accorded the right of participation in such review. Hypothetical Corporation considers it "harassment" and cause for termination for a supervisor or manager to invoke a "for cause" employee intoxicant testing circumstance negligently or in otherwise bad faith. Adversarial intracompany human relations compromise our corporate mission, and we work hard to maintain a business culture in which trust and cooperation are the rule. HTC does not permit workplace harassment of *any* sort. Any incident of workplace harassment is to be reported in complete confidence directly to the Director of Employee Relations.

HTC provides a comprehensive Employee Assistance Program (EAP). This employment benefit is without cost to you and is totally confidential. HTC management is prohibited from access to your EAP records. We recognize that no one is immune from personal problems.

> Employees encountering adverse individual or family circumstances are urged to avail themselves of the broad range of services of our EAP—for your success is our success. Read the EAP booklet provided in your employee packet. Call 1-800-EAP-HELP should you need assistance.
>
> Finally, the HTC substance abuse policy shall conform to the requirements of the Americans with Disabilities Act.

While some would undoubtedly object strenuously to the proposition to turn over positive "for cause" drug test results to law enforcement, it is clear from the *stare decisis* precedents alluded to by Justice Ginsburg in *Chandler v. Miller* that private parties have the right to transmit such "evidence" under the Fourth Amendment "plain view exception" principle. Moreover, the foregoing policy statement makes it clear that *any* type of intoxication that results in risk and/or loss is equally actionable. Current suspicionless drug testing policy excludes alcohol, the drug responsible for the great majority of non process-related industrial accidents. This proposed policy also addresses harassment concerns, making it clear that the invokation of "cause" without truly having cause will not be tolerated. Methodological and procedural safeguards such as commitment to forensic quality testing and rights of review and challenge are built in. Finally, this hypothetical policy is more in keeping with the spirit of effective, progressive management strategy leading companies ostensibly value—a business culture of cooperation and mutual concern rather than one of impersonal coercion.

Thesis Summary

A core question posed in this thesis is whether one should be required to pass a drug screen to obtain and/or retain employment as a general proposition, either through explicit legal enactment or extrajudicially through governmental acquiescence to corporate-institutional policy. The long answer is *no*. While there are broader suspicionless drug testing issues—such as mandatory screening in athletic or a variety of "custody" domains (e.g., parole, probationary, schools, or "drug rehab" settings)—, in concluding and summarizing the argument and evidence heretofore presented, I will focus on the employment domain, as it constitutes the bulk of the market for testing services and brings into sharpest focus the ethical problems that attend this form of search and surveillance.

Mass indiscriminate employment drug screening is unwise, unscientific, unconstitutional, and unethical.

- It is unwise first because it cannot justified on the basis of the shaky, often absurd empirical evidence purporting to legitimize it (including our confused history of contradictory and naive attitudes toward intoxication and "addiction." Chapter Two). Surveillance policy that puts citizens at risk of being labeled "drug abusers" and *de facto* convicted criminals subject to summary administrative punishment ought be held to a much higher standard of risk/cost-benefit analysis than has heretofore been the case. Speculative assertions by testing vendors and their collaborators as to the extent of the drug

abuse "problem" and "prophylactic" virtues of mass testing should be seen for the self-serving hyperbole they are (Chapter Three).

- Mass drug testing is unwise on the second count in that it cannot but be a waste of clinical bioassay resources. To repeat: forensic-quality drug testing cannot be done in mass quantity for the minuscule price that employers are willing to pay (and it properly should be *forensic* quality, given the stakes for those tested). Moreover, given that the number of aggregate "confirmed positives" continues to be well below official estimates of workplace prevalence, the "negative predictive value" (a.k.a. "statistical power") of mass screening is dubious (Chapter Four). The analytical chemistry infrastructure has much more important work awaiting it. We need to accurately assess the health of the environment, the safety of our foods and pharmaceuticals, the integrity of a breadth of raw materials and finished products, and the disease indices of our medical patients more than we need a urinary Maginot Line erected against a phantom horde of stoned employees.

  A nation whose security and surveillance methods prove inadequate to keep illegal drug metabolites out of the urine of a Charles Manson ought take pause and savor the utter silliness of the proposition that it can do so en masse on the cheap in the general population.

- Suspicionless drug testing violates the Fourth Amendment to the Constitution, no matter how you slice it (Chapter Five). Conservative "Original Intent" your cup of tea? While many aspects of "original intent" will forever remain murky,

this one could not be more clear. Both the Framers' antipathy toward the British Writs of Assistance and General Warrants, and Madison's intent to put core "unalienable rights" beyond the ready reach of "factitious majorities" eager to run riot (via, among other tactics, perpetuation of the "hue and cry" principle) over the real or imagined social crisis *du jour*, are compelling in this regard. Liberal "Living Constitution" more to your liking? Evidence of the growing need for personal protection of privacy from snoopers of every stripe and the corporate-administrative state could not be more stark. We may indeed "have our own laws at Disneyland," but we still have a Constitution that properly supersedes them. Recall Madison's lament: "*If men were Angels, no government would be necessary . . .* " And if Angels governed, from corporate boardrooms to the Congress, perhaps we wouldn't have to be so vigilant with respect to civil rights.

Suspicionless drug testing also violates Title VII of the Civil Rights Act with respect to illegal employment discrimination, given that it accords the negative drug screen across-the-board controlling force in employment decisions in the absence of across-the-board evidence of job-relatedness and compelling need. Recall from the introduction to this work: Your perhaps otherwise extensive and stellar C.V. counts for nothing should you refuse a required employment drug screen. Such is not only empirically and legally indefensible, it is ethically destitute.

- Indiscriminate drug testing is unethical (Chapter Six). It goes beyond J.S. Mill, beyond "liberty" and "tolerance" of disapproved indulgence (recall that our focus

> is on those who are drug-free), and into an Augustinian sense of humility and wariness of overweening pride that begets the autocratic state, with its inevitably tragic delusions of infallibility. It goes into a Kantian respect for persons as ends, a reciprocal respect for basic human autonomy, freedom, and dignity that only a secure sense of self can provide—an inviolate sphere of the private self requisite for social competency. The coercive panoptic state (to which we must now attach the adjective "corporate") begets neither social competency nor effective, willing compliance. As was stated at the outset: "*Bentham got it wrong: the Panopticon is a net loser, devoid of enduring moral force with respect to the dissolute, irrelevant at best with respect to the upright.*"

Again, this thesis assumes the continuation of harsh criminal sanctions against currently proscribed recreational drugs. *Laws* exist; enforce them properly. Credible science exists for the quantification and assessment of risk; *use* it, for a change, in the promulgation of drug policy. Ethical preventive and harm-reduction inducements exist (Chapter Eight); employ them honestly.

And above all exists a hard-won, morally-anchored Constitution that disavows the expedient trampling of individual rights; *obey* it.

Any morally serious person cannot but desire and work toward a healthy and "upright" social order. An unrestrained metabolite police, however, will not help us get there, for a truly healthy social order cannot but be one in which civil rights are reciprocally accorded their due—among them the right of our youth to real moral education rather than moralistic neo-"Reefer Madness"/ "Just-Don't-Do-It"

platitudes, and also among them the right of adult citizens to not have to symbolically "prove" their rectitude in deference to *clamorem et ethusium* machinations or pay with their livelihoods.

Again, as stated at the outset of this investigation, "*there are ethically appropriate methods available to a society for dealing with risk and loss. It is my contention, however, that indiscriminate drug testing is not among them.*" The body of this thesis has sustained that claim. *Obsta Principiis.*

EPILOGUE

Why take on such an acrimonious topic?

From January of 1986 through about May of 1991 I served under a series of personal services contracts with a laboratory owned by a major environmental engineering and remediation firm. We performed environmental and health physics support analyses for clients with radiation and mixed waste contamination and exposure problems (mixed waste is that which is composed of conventional chemical toxins and radionuclides). Since much of our work involved litigation support, we were trained to—and continually reminded of the need to—perform to forensic standards (i.e., to a quality level sufficient for our analytical results to stand up as viable evidence in court).

It was my job to develop, install, and maintain custom, procedure-specific software for use by the technicians in calculating radionuclide concentrations and dose exposures. I also worked on statistical quality control applications, applied research toward development of analytical correction factors, and helped write and subsequently administer our Software Quality Assurance procedure. While at this complex I worked amid much of the very same analytical technology (e.g., High Performance Liquid Chromatography, Gas Chromatography/Mass Spectrometry) also employed by drug testing labs, as much of our specimen workload consisted of

urine samples suspected of contamination. I also learned just how difficult it can be to substantiate analytical results. We underwent frequent adversarial lab audits that would be the envy of a Spanish Inquisitor. I have been audited right down to my rounding algorithms.

During this period a couple of emotionally charged episodes involving suspicionless drug testing hit the news in East Tennessee. First, the local school board sought to enact a mandatory drug test policy aimed at teachers. When the teachers' union protested and sued to enjoin the policy, Board Superintendent Earl Hoffmeister went ballistic in the press, accusing the teachers of "hiding behind the Constitution" in order to cover up drug abuse among their members.

There *was* no evidence of drug abuse among Knox County teachers.

Also during this period, Knoxville Police Chief Phil Keith made an incredible statement during an on-the-record interview with the local paper. He opined that he should have the power to order anyone "to go take a drug test right now; don't ask me any questions, just go do it." He had been fighting with his police officers over a proposed random drug testing policy for the department, a policy the rank-and-file vigorously opposed.

These highly visible controversies made for interesting lunchroom conversation at our lab. Our chemists derided the notion that commercial clinical labs could do high-quality work on the cheap in mass production mode. The CEO of a large local clinical lab that performed the bulk of the drug testing in East Tennessee, had

stated to the press that his lab's technology was "absolute; if we do everything correctly there is *no possibility of error*" (Knoxville Journal, 12/13/90, emphasis mine).

A very big "if." This comment brought forth torrents of rebuke in our facility. The manager of our mixed waste lab, a bright and experienced chemist himself, remarked: "I'm exempt from that sh--; I'd have to think long and hard before going to work for a company that wanted to make me take a drug test."

The local teachers' union President was a member of my church. We talked about the dispute with the school board at length, and I provided him with extensive technical lab information to use in his fight against the policy. The teachers ultimately won a permanent federal court injunction against the board, and the whole idea was dropped and faded from public view.

By this time, though, the issue had gotten my continuing attention, and I followed the progress of similar disputes around the country. Suspicionless drug testing programs expanded rapidly in the late 1980's in the wake of President Reagan's Executive Order 12564 (Drug-free Federal Workforce) and the federal Drug-Free Workplace Act of 1998. At every turn, those who objected to forced testing were subjected to withering *ad hominem* attacks. Dissent was equated with "support for drug abuse" or the dissenters' need to hide their imputed drug use and legalization agenda. Indeed, several years ago former "Drug Czar" Lee Brown, publicly rebuking then-Surgeon General Joycelyn Elders for her musings on the

utility of scientific study of drug legalization issues, flatly declared that "[T]here will be no discussion on drug legalization; even the discussion is harmful."

In 1992 the issue became far more than an ethical abstraction to me. My wife was transferred to Las Vegas by her employer—the very same corporation I had also worked for in Oak Ridge, where she was a senior Quality Assurance manager in another division—to oversee the QA program of their new environmental restoration contract based in Nevada. The operations manager in her new office had learned of my background and prior contract work for the company and offered me a "part-time temporary" job. He was trying to help us out with our resettlement while getting some of his short-term service needs filled as painlessly as possible by end-running—through the "temp" process—the Human Resources Department proscription against spouses working in the same office.

After we had agreed on money and scope of work, a secretary came in and put a consent form in front of me authorizing a pre-employment drug screen. Oh . . .

Uh . . .

The moment of truth had arrived. Would the exigency of trying to find work while negotiating a new mortgage in a new town on one income override ostensibly deeply held ethical principle? Even though I knew they'd find nothing in my urine beyond what I jokingly described as "a large spike in the GC/MS Yuban Auto-Drip region" (along with some occasional Mouton Cadet Bordeaux metabolites), I found the whole episode one of lose-lose irony and idiocy. Unlike many a prospective hire,

I was utterly familiar to this company; I had once been cited with a corporate quarterly quality award (even though technically I was not at the time an "employee") and had been twice thanked by the company with cash awards and handsome engraved plaques extolling my contributions to technical knowledge for papers I had written and presented on their behalf while in Oak Ridge. Their St. Louis laboratory was still using software I had written while in Oak Ridge and had modified for use in the St. Louis operation. I had produced and directed a 4-hour radiation fundamentals and safety video training series for the Air Force Radiobiology Research Institute at Bethesda (AFRRI) under a Health Physics Group contract awarded the company. My documented record and portfolio screamed out "this man cannot possibly have had the time to be a drug abuser." Indeed, during the period coincident with my tenure at the firm I frequently worked from six in the morning to eleven p.m. or midnight, six to seven days a week at times, either at the lab or in my struggling academic audio-video production studio sideline business. My drug of choice and necessity was in fact (and remains) Yuban Auto-Drip.

No matter; spouse-hire policies are artfully malleable, drug screening policies are not. The Ops manager was sympathetic to my position on the issue, but insisted that his hands were tied. In fact they were *not*—I had a copy of the section of the company's Human Resources policy that addressed pre-employment drug testing; it had the usual weasel phrases giving the firm the option to eschew drug screening (e.g., say, in the case of having headhunted an extremely sought-after senior scientist or executive who might take offense at the requirement to be tested and

hire on elsewhere). However, he was unwilling to risk his neck by contravening the policy for a "part-time temp."

I chose not to rub his nose in this document. The well had been irremediably poisoned, and discretion dictated that I not take any action that might have internal repercussions rebounding on my wife. Lose-lose.

Rather ironically, during the entire 5+ years I had served this company I had never had to submit to drug testing because of my status as a "contractor," (to the aggravated envy of my "employee" colleagues) despite the facts that I had my own keys to the buildings, supervisory status on the Novell network, full access to all manner of confidential internal operations data, and served a mission-critical role at the lab.

As Bob Dole says: *Whatever.*

No Sale. I would just move on. We got our house; I got a job with the Medicare Peer Review, and joined the excellent graduate program at the UNLV Institute for Ethics and Policy Studies, where I am now completing my degree work.

An interesting aside: Prior to signing on with the Peer Review, I answered a REECO newspaper ad soliciting a computer analyst—one which meshed with my recent data-processing background. Reynolds Electrical Engineering Corporation (REECO) was then a long-time prime contractor for the Department of Energy at the Nevada Test Site. After I finished filling out the job application, I read the fine print statement I would have to sign, one authorizing a background investigation. It

essentially said: "REECO is hereby authorized to obtain personal information regarding the applicant from any source whatever, whether material or not and whether documented or not, and applicant hereby indemnifies REECO against any and all liability regarding any subsequent breach of confidentiality with respect to any information obtained in the course of said investigation." I paraphrase here, for when I objected and declined, they refused to allow me to take the document with me.

Again, No Sale. An overwrought concern? Perhaps. But, at some point, someone has to just say no to these things.

Las Vegas is the surveillance capital of the known universe, and drug testing in the casino industry is a given. The leading clinical lab here runs frequent large newspaper ads extolling the virtues of its drug screening operation. One ad repeatedly and breathlessly claimed: *If you're not pre-employment drug testing, you're hiring the rejects of those companies that do!* No matter that credible evidence supporting such a blanket assertion is nowhere to be found.

Ironies go unnoticed: Caesar's Palace touts its highly visible RIAH® hair drug test policy while its huge billboard out front promotes the most recent return engagement of the "Doobie Brothers." Of course the fans flocking to the performances nearly all recall what the 60's slang term "doobie" refers to, and, although I've not been to one of their shows at Caesar's, I'll bet there are usually periodic wafts of a certain pungent smell in the air.

More ironies accrue as one surveys the general social, political, and legal climates pertaining to intoxication. As Walter K. Olson has pointed out, current operative interpretations of ADA, the Americans with Disabilities Act, define "addiction" as a protected disability with respect to employment discrimination (see *Life, Liberty, and the Pursuit of a Good Beer* in The Washington Monthly, Sept. 1997, excerpted from his book The Excuse Factory). Moreover, while "addicts" of the illicit drug variety must submit to "treatment" and abstain from their habits to be protected under ADA, "alcoholics" are afforded blanket protection. If you allow yourself to be officially defined as an alcoholic, you cannot be fired for "falling off the wagon" even if your continuing or episodic indulgence interferes with your ability to function at work. That this is so is testament to the ubiquity of alcohol in our culture and economy, a "drug" that lubricates our leisure and funds our publications and our entertainments (and our politicians) to an extent unrivaled by all but the now-besieged tobacco. Propositions to legislatively remediate the epidemiologic trauma attributable to alcohol and tobacco are invariably met with derisive clucking by liberal and conservative political apologists alike admonishing us to "heed the lessons of our failed prohibition experiment." This while they never pass up an opportunity to muck up the "drug abuse" data with alcohol and tobacco statistics, as we have seen. And this while it is concomitantly thought an ethical and efficacious policy proposal that we return violent predators back to the streets early to free up cell space to send the hapless marijuana "mule" to prison for life without parole. (Or, as Mr. Gingrich would prefer, to administer the lethal injection.)

The political rhetoric concerning suspicionless drug testing has heated up dramatically in the past few years, as I have alluded to elsewhere on these pages. I am dismayed and offended by the torrent of abuse heaped upon those who oppose any aspect of our mindless "War on Drugs." My father taught me to revere the founding principles of this nation. For him, such were no mere civic homilies; now in his 80's, he suffers to this day from the acute lifelong residual effects of the leg he left behind on a European World War II battlefield more than fifty years ago.

Mine was a young childhood lived down the street from George Washington's Revolutionary War headquarters in Morristown, New Jersey. Mine was an education replete with class trips to our principal founding sites in New York and Philadelphia. Mine was a boyhood fascination with the works of Jefferson and Madison and their colleagues. Mine was a youth when the Fourth of July and Veterans' Day stood for more than an excuse for the latest Dollar-Daze marketing blitz.

Mine is a patriotism having no need of cheap legislative whips and chains that sully the dignity of our Constitution.

Mine is now also a sad admiration for the likes of a Kathy Sohar. ABC World News reported on March 8th, 1997 that Ms. Sohar, an accomplished senior employee of Global Access Communications of Boston, was summarily fired by the company's new corporate owner, Vyvx, Inc., for refusing on privacy principle to submit to a hair test—this after she had already taken and passed a urine drug screen.

Lose-lose stupidity. Ms. Sohar, you are to be congratulated for standing on principle. I think I know exactly how you must feel.

John Gilliom, an author cited in the course of this inquiry, views the widespread use of drug testing as merely one of the high-tech panoptic means of ensuring, as he puts it "the automatic functioning of power," and the ideal employee/citizen is the one who passively submits to policy, regardless of its utility or propriety. For Gilliom, the putative drug screening policy rationales proffered (e.g., health, safety, and productivity) are just so much transparent window-dressing. The real goal is one of behavioral homogeneity, one of reflexively deferential attitudes toward authority, however arbitrary (or illegitimate) that authority might be.

I have to agree with Gilliom. But, I do not think that this is what Messrs. Jefferson and Madison and their colleagues had in mind as they forged this nation, and we ought take more serious pause before tampering with the elegant moral and legal architecture they bequeathed us.

Coda

This inquiry began with a quotation from the autobiography of the late, venerable Eric Sevareid. I close it with an equally fitting one excerpted from the monthly journal column of Lewis Lapham.

> from *New wine in old bottles*
> Lewis Lapham, Editor, Harper's Magazine, February, 1998
>
> . . . Although I have often heard it said that the truth shall make men free, I'm never sure that everybody in the room attaches the same meaning to the phrase. The truth isn't about the assimilation of

> doctrine or statistics, not even about the discovery of termites in the wainscotting of the White House. It's about acquiring the courage of one's own thought, and if it's impossible to have courage without convictions, it's equally impossible to have convictions without knowledge and understanding. The task is never an easy one, especially in a society that encourages its citizens to wander through their lives in a passive stupor. I'm told that as a nation we spend $350 billion a year on liquor, pornography, and drugs, and the cold war against the American Intellect constitutes a more profitable business than the old arrangement with the Soviet Union.
>
> The newspapers meanwhile worry about the extinction of what the editorial pages sometimes call "the educated citizen"—i.e., yet another endangered species, like the tawny ferret and the giant auk. But to the best of my knowledge I have never met such a person. Even the idea of an educated citizen strikes me as preposterous. I can conceive of a "self-educating citizen," and have had the good fortune to meet a number of them who can be so described, none fool enough to proclaim themselves educated. Without exception they possess the valor of their ignorance, conceiving it neither as a blessed state of being (comparable to attendance at one of President Clinton's Renaissance weekends) nor as a material good sold in a store (even at Harvard's rate of $30,000 per annum) but as a ceaseless process of learning and relearning. If in sixteen years they have spent 10,000 hours in a classroom (roughly the equivalent of fourteen months), they expect to spend another fifty years revising what they thought they had learned in school.

I count among the major good fortunes of my life my time spent in recent years in the company of my fellow students and faculty mentors within the UNLV Institute for Ethics and Policy Studies, a wise, collegial, compassionate, and diligent lot engaged steadfastly in the rewarding work of Lapham's "self-educating citizen." I leave this institution with much gratitude, and I emerge much better equipped to continue the "ceaseless process of learning and relearning."

– Robert E. Gladd, February 1998

APPENDIX A

The National Alliance for Model State Drug Laws: Pushing the envelope on IRS § 501(c)(3) non-profit "charitable organization" regulations

The Internal Revenue Service charters tax-exempt non-profit charitable organizations meeting certain criteria pertaining to non-partisan cultural, religious, scientific, educational and other public service activities. § 501(c)(3) organizations are specifically prohibited from engaging in political campaigns and legislative lobbying. In the words of the IRS:

> The exempt purposes set forth in § 501(c)(3) are charitable, religious, educational, scientific, literary, testing for public safety, fostering national or international amateur sports competition, and the prevention of cruelty to children or animals. The term charitable is used in its generally accepted legal sense and includes relief of the poor, the distressed, or the underprivileged; advancement of religion; advancement of education or science; erection or maintenance of public buildings, monuments, or works; lessening the burdens of government; lessening of neighborhood tensions; elimination of prejudice and discrimination; defense of human and civil rights secured by law; and combating community deterioration and juvenile delinquency . . .
>
> . . . A § 501(c)(3) organization may not engage in carrying on propaganda, or otherwise attempting, to influence legislation as a substantial part of its activities. Whether an organization has attempted to influence legislation as a substantial part of its activities is determined based upon all relevant facts and circumstances."[171]

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[171] Source: U.S. Internal Revenue Service § 501(c)(3) regulations, [http:// www.irs.ustreas.gov/prod/bus_info/eo/exempt-req.html], March, 1998.

A curiosity obtains: "The National Alliance for Model State Drugs Laws," a tax-exempt organization directly funded with taxpayer dollars, one boasting of a mandate to influence anti-drug legislation at the state level, in apparent direct contravention of § 501(c)(3) intent. The following is excerpted from their website located at http://www.natlalliance.org.

> The National Alliance for Model State Drug Laws began as the President's Commission on Model State Drug Laws (Commission), a Congressionally established body charged with creating a model code of laws to help states effectively address alcohol and other substance abuse . . . [The Commission developed] 44 model laws and policies which offer a comprehensive continuum of responses and services to fully address alcohol , tobacco and other substance abuse problems. Tough sanctions punish those persons who refuse to abide by the law. Equally important, the sanctions are designed to be constructive, promote prevention, and attempt to leverage alcohol and other substance abusers into treatment. The 44 legislative remedies are in a Final Report comprising five volumes:
>
> 1. Economic Remedies.
> 2. Community Mobilization
> 3. Crimes Code Enforcement
> 4. Treatment
> 5. Drug-Free Families, Schools & Workplaces
>
> In December 1993, the Commissioners submitted their model laws to the National Governors Association, the National Conference of State Legislatures, Attorney General Janet Reno and Dr. Lee Brown, then Director of the Office of National Drug Control Policy. President Clinton distributed the Final Report and the accompanying treatment study by Rutgers University to state and local leaders early the following year.
>
> Recommendations, no matter how promising, become reality only when they are acted upon. The Commissioners feared that simply mailing out the Final Report would lead to their model laws collecting dust on shelves. Their solution was to create The National Alliance for

Model State Drug Laws (Alliance), a 501(c)(3) nonprofit organization, to serve as an ongoing resource on the model laws and related state legislation.

Funded by Congressional appropriations, the Alliance, in coordination with the Bureau of Justice Assistance and the Office of National Drug Control Policy, are holding state model drug law conferences across the country. These one-day events are intense, hands-on workshops designed to educate state individuals about the model laws and policies . . .

We offer our model laws as a menu of options from which the individuals select those which they believe will most effectively help the state. The ultimate decisions about what to do rest with the conference participants, strengthening their commitment to see their recommendations to fruition. The Alliance has already co-sponsored 9 successful state conferences, and plans to hold many more such events in the coming years.

Drugs . . . Everybody's Problem.

- Illegal drugs burden society with approximately $67 billion in social, health and criminal costs each year.
- Nearly 1 out of 5 Federal dollars spent on Medicaid is attributable to substance abuse.
- Up to 50% of all general hospital admissions are alcohol and drug related.
- Untreated alcoholics incur general health care costs that are at least 100% higher than those of non-alcoholics.

College

- Of the 12 million current undergraduates, more will ultimately die from alcohol-related causes (240,000 to 360,000) than will earn MAs and PhDs combined.
- 95% of violent crime on campus is alcohol-related
- 90% of all reported campus rapes occur when alcohol is being used by either the assailant or the victim.
- One in 3 college students now drinks primarily to get drunk.

Crime

- 60%-80% of criminal defendants are addicted to drugs and/or alcohol.
- 33% of all murders or manslaughter incidents are related to illicit drug and alcohol use. Over 50 % of spousal murders are drug-or-alcohol-related.
- In 1993, 54%-81% of adult males arrested and 42%-83% of adult females arrested tested positive for drugs.

Fetal

- More than 5% (221,000) of the 4 million women who give birth each year use illicit drugs during their pregnancy.
- Overall hospitalization costs for drug-exposed infants and fetal alcohol syndrome create an annual economic loss to the country of $0.6 to $3.3 billion.

Prescription Drugs

- Over 20 million people abuse or misuse prescription drugs in the US.
- Approximately 15% of all legal controlled substance medications are used illicitly, that is 33 million prescriptions with 1 billion dosage units each year.

Tobacco

- Cigarettes kill more Americans than AIDS, alcohol, car accidents, murders, suicides, drugs and fires combined.
- 90% of all smokers begin to smoke before they turn 18 years old.
- Expected lifetime medical expenditures of the average smoker exceed those of the average nonsmoker by 28% for men and 21% for women.

Workplace

- 71% of all current illicit drug users age 18 and older (7.4 million adults) are employed.

- The cost of alcohol and illicit drug use in the workplace, including lost productivity, medical claims and accidents, amounts to $140 billion per year.

- 68% of all adult cocaine users in 1995 were employed either full- or part-time.

Youth

- The average age at which youth begin drinking is 13.

- In 1995, among youths aged 12-13, 4.5% were current illicit drug users. The highest rates were among young people age 16-17, 15.6 % and age 18-20, 18%.

- Nearly 1 in 20 of today's high school seniors and 1 in 30 of today's 10th graders is a current daily marijuana user.

- 10% of Americans age 18-20 are heavy alcohol users and 15% have used illicit drugs in the past month.

Mission

"To promote comprehensive model state drug laws which significantly reduce, with the goal to eliminate, substance abuse through effective use and coordination of enforcement, treatment, education, prevention, community and corrections resources."

Goals

1. To educate state legislators, governors and other state and local individuals about the purposes and application of the model laws, and the multi-disciplinary partnerships built into the laws.

2. To help state legislators, governors and other state and local individuals tailor, revise and update the model laws to address particular state problems and needs.

3. To maintain a legislative clearinghouse which provides information on the model laws and supporting documents, and related state laws and bills.

4. To facilitate and coordinate collaborative coalition building among enforcement, treatment, education, prevention and community groups, and between these groups and state leaders.

The Alliance's resource center activities include:

- Providing our model laws and related state statutes on 44 alcohol and other substance abuse topics.
- Helping compare our model laws with existing state statutes.
- Helping analyze states' versions of the model laws and related state statutes.
- Sharing legislation, policies, and program ideas among states.
- Offering drafting tips and language to tailor our model laws to individual state needs.
- Identifying state resource people on the model laws and related topic areas.
- Providing access to a nationwide network of legal, policy, and program experts on the model laws and related topic areas.
- Giving guidance on policy, legal and substantive issues related to the model laws and topic areas.
- Facilitating partnerships among state officials and substance abuse professionals.
- Participating in and conducting educational briefings, summits, meetings, etc. on the model laws and related alcohol and other substance abuse topics.

Our portfolio of legislative proposals help states provide a continuum of responses-- enforcement, treatment, education, prevention, housing and community and workplace-- which:

- Intervene early with children with substance abuse related problems and refer them to treatment.
- Provide insurance and Medicaid funding for appropriate levels and modalities of treatment.
- Reduce crime and prison overcrowding.
- Teach youth healthy attitudes and the benefits of leading a substance free life.

- Shut down crackhouses and turn boarded buildings into recreation centers and other useful neighborhood centers.
- Stop the laundering of billions of dollars in illegal drug profits.
- Provide consumer safeguards regarding managed care.
- Decreasing alcohol and drug-related highway fatalities.
- Prevent the illegal distribution and diversion of prescription drugs and chemicals.
- Decrease absenteeism, accidents, sick claims and disciplinary actions in the workplace.

A "charitable organization" involved with facilitating and coordinating "enforcement" by lobbying (for that is indeed the appropriate verb) statehouses to enact legislation such as "The Model Drug-Free Private Sector Workplace Act," a measure focused on suspicionless drug testing? This is a legitimate § 501(c)(3) function?

Before examining "The Model Drug-Free Private Sector Workplace Act," it is interesting to note the statistics the Alliance proffers to justify their ends. Once again we witness the customary empirical ambiguities (spawn of the by now familiar dubious paternity) and CASA-esqe mantra of "alcohol, tobacco 'n drugs" drug war partisans feel compelled to employ to inflate the apparent extent of the illicit drug "problem" (see Chapter 2). Look closely: most of the statistics asserted by the Alliance speak to alcohol and tobacco consumption, with a bit of "prescription drug abuse" thrown in for good measure.

None of which are relevant to the particulars of "The Model Drug-Free Private Sector Workplace Act." This legislative proposal, similar in thrust and content to

those proposed by The Institute for a Drug-Free Workplace—another organization promoting mandatory drug testing legislation at the statehouse level—focuses significantly on providing near-blanket indemnification for private sector employers conducting suspicionless drug testing. Employers would be immune from lawsuits resulting from false negative tests (i.e., where an employee tested negative, subsequently caused an injury accident, and was found to have indeed been using drugs proximate to the incident. See Section 16.c) and would limit "defamation" liability in the wake of false positive results "*if the employer's reliance on a 'false positive' was reasonable and in good faith*" (Section 16.b.2).

While the Act declares that private-sector suspicionless drug testing is not "mandatory," it states in Section 11.b that an employer is required to conduct both suspicionless and for-cause drug testing "*in order to qualify as a private sector drug-free workplace and to qualify for the provisions of Section 5.*"

Section 5, *Applicable Conditions for a Legal Policy*, states that

> [I]t is lawful for an employer to test employees or prospective employees for the presence of alcohol or other drugs, in accordance with the provisions of this [Act], as a condition of continued employment or hiring However, in order to qualify for protection from litigation regarding certain legal claims for acting in good faith on the results of a substance abuse test, employers must implement and maintain a comprehensive drug-free workplace program and adhere to the procedural safeguards that demand accuracy and fairness as included in subsequent sections of this [Act].

While the specifications pertaining to "*procedural safeguards that demand accuracy and fairness*" do in fact represent a bit of improvement over the current

patchwork of state laws and regulations that leave employees with widely varying levels of procedural and methodological protection,[172] the principal thrust of this Model Act is to provide employers comprehensive authority to test employees at will with little fear of liability. Section 11.c: "*Nothing in this section shall prohibit a private employer from conducting random testing or other lawful testing of employees.*" Section 19: "*No physician-patient relationship is created between an employee or job applicant and an employer, medical review officer, or substance abuse testing laboratory per-forming or evaluating a substance abuse test solely by the establishment, implementation, or administration of a substance abuse testing program.*" Section 22: "*All laws and parts of laws in conflict with this [Act] are repealed.*"

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[172] Unfortunately, such standardization is not assured; the Alliance makes much of the purported virtue of the "flexibility" of their approach in modifying the Model Act in accordance with states' individual preferences—which are likely to be deferential to favorable provisions proffered by testing vendors to the extent that individual state laws and absence of political opposition permit. The uneven procedural safeguards patchwork is likely to re-emerge, ranging from forensic standards in a rights-vigilant state such as California to much more lax oversight in the deep south.

If the history of the regulatory specifications process concerning Executive Order 12564 (Drug-Free Federal Workplace order) and CLIA 88 (the federal Clinical Laboratories Improvement Act of 1988) are any guides, analytical vendors' advocates will fight tooth and claw for the removal or emasculation of "overly burdensome" quality assurance regulations. One has only to peruse the "public review and comment period" documentation of the E.O. 12564 and CLIA 88 regulatory processes in the Federal Register to see such quiet commercial self-interest at work. Phrases such as "too restrictive," "too costly," "excessive burden," and "fewer challenges . . . would be adequate . . . " are sprinkled throughout the record. See, for example, Federal Register, Vol. 53, No. 69, April 11, 1988, pp. 11970 - 11989.

We should similarly expect back-door efforts to attenuate any Alliance-progeny Model Act methodological protections to commence as soon as a Governor's ink has begun to dry.

Section 19 is particularly interesting. Vendors of drug testing services routinely and prominently tout their use of MROs (Medical Review Officers) to review lab results. An MRO is a licensed physician (M.D.) with additional training and experience in toxicology, pharmacology, and analytical chemistry. Critics point out that the MRO function is overwhelmingly one of providing an aura of professional respectability to the suspicionless drug testing process—but one doing violence to the ethical duty of the physician under the Hippocratic Oath and the dictates of the physician-patient relationship. In this type of tactic ("*no physician-patient relationship*") we see drug testing advocates trying to have it both ways. Justification for mandatory testing is invariably anchored to interwoven employee health, safety, and productivity concerns. As Section M-210 (Policy Statement) declares:

> Just as schools offer an appropriate platform for intervention with children and youths with alcohol and other drug problems, the workplace is an appropriate platform for intervention with adults. Two-thirds of adult drug users are employed. Adults also have little opportunity elsewhere to become educated about alcohol and other drug abuse problems and to be directed to any needed assistance.
>
> Employers have two important reasons for wanting to establish alcohol and other drug-free work-place programs. First and foremost, employers are concerned about the health, safety, and well-being of their employees. Second, alcohol and other drug abuse costs businesses billions of dollars each year in increased medical claims, medical disability costs, decreased productivity, injuries, theft, and absenteeism.
>
> This legislation establishes comprehensive private sector alcohol and other drug-free workplace programs. In the past, some employers have considered drug testing in and of itself to be a complete workplace substance abuse program. However, the existence of a substance abuse testing program by itself will only serve to identify

> alcohol and other drug abusers. Testing does nothing to educate, treat, or rehabilitate alcohol and other drug abusing employees.

In other words, it purportedly *is* a health issue (and employers are properly medico-social workers). But, declaring there to be no physician-patient relationship effectuated by drug testing puts the MRO in an ethically untenable position and begs the question of just *what* type of encounter the indiscriminate drug test truly is. We know what it is: Law enforcement by proxy.

Consider the observations of D. Kim Broadwell in *The Evolution of Workplace Drug Testing: A Medical Review Officer's Perspective*:

> Ethical concerns about employee drug testing have been voiced, particularly by occupational medicine physicians. Drug testing programs potentially destroy mutual trust between the employee and the employer, and punishment for behavior off the job—which may have no direct influence regarding on-the-job performance—is not the environment most workers would choose. Although created to protect, in practice, the role of the physician acting as an MRO is unique to the degree that the doctor is pitted against the employee. No physician-patient relationship is required or suggested, contrary to customary medical practice. The accused is generally contacted by telephone and not examined, and the MRO participates in labeling as a drug user (and usually the firing of) an individual he or she never sees. Issues of diagnosis, therapy, and rehabilitation are peripheral to the intent of the contact. None of these factors fits the paradigm of ethical practice of the healing arts, and many physicians feel unethically bound by MRO requirements, which are forensic, not medical, in nature . . .
>
> Drug testing does not diagnose addiction or impairment, and concerns persist about the ability of poorly trained or motivated doctors to carry out the primary safeguard function of the MRO—to prevent falsely positive test results. A zealous physician who, for

> personal reasons, views his role as a drug enforcement officer may not provide the employee much protection.[173]

A 1997 monograph from the Journal of Medical Ethics echoes the concerns:

> CONCLUSIONS: Workplace screening for drugs of abuse raises many ethical issues. If screening is considered as being part of medical practice with the involvement of occupational health physicians, as suggested by the Faculty of Occupational Medicine, then the ethical requirements of a normal medical consultation are fully applicable. The employee's full and informed consent to the process must be obtained and the employee should have an unfettered right of access to all the relevant records and to the urine sample he/she has provided in the event that he/she wishes to challenge the opinion expressed by the physician. If the process is not part of medical practice then employees should have the same rights as they would have if required to provide intimate body samples in the course of a criminal investigation, given the potentially serious consequences of an erroneous positive finding for their livelihood.[174]

It should be clear that the intended and actual function of the MRO from the perspective of the testing vendor is that of the methodological fig leaf, nothing more. The fact that issues "*of diagnosis, therapy, and rehabilitation are peripheral to the intent of the [MRO] contact*" is actually irrelevant, given the framing of legislation such as the Model Act hawked by The Alliance and its auxiliary law enforcement brethren—for it is assumed *a priori* that a positive drug test result *means* that therapy and rehabilitation are necessary, with summary termination the consequence for dissenters. As recounted elsewhere in this thesis, "*if you use illegal*

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[173] D. Kim Broadwell, *The Evolution of Workplace Drug Testing: A Medical Review Officer's Perspective*, The Journal of Law, Medicine, and Ethics, Vol. 22:3 Fall 1994, pp. 244-45.

[174] A.R. Forrest, *Ethical aspects of workplace urine screening for drug abuse*, Journal of Medical Ethics, Vol. 23, No. 1, pp 12-17.

drugs and claim to do so without adverse consequences, you are by definition in Denial; your very dissent proves you to be an addict."

Some closing observations: Again, while the term "alcohol" is referred to repeatedly in this model legislation, there are no explicit provisions in the Act for indiscriminate alcohol testing—nor any for tobacco. And—*broken record, broken record*—such is because those are *legal* substances. The fact that alcohol abuse and routine tobacco consumption account for nearly all aggregate health, safety, and productivity losses attributable to "drugs" is somehow ignored when it comes to mandatory "substance abuse" surveillance, which only looks for marijuana, cocaine, amphetamine, PCP, barbiturate, and opiates indulgence.

To summarize: Section M-210 (Policy Statement) the Model Act declares, in (5) Substance abuse testing. "*Employers must implement substance abuse testing as part of any comprehensive drug-free workplace program. Pre-employment, reasonable suspicion, medical fitness, and post-accident testing would be required by a comprehensive drug-free workplace program in compliance with this Act. Random drug testing is neither prohibited nor mandated by this Act.*"

A state enacting this proposed legislation would subsequently be in the business of "certifying" private enterprises as "Drug-Free Workplaces." It is but a short hop from there to requiring that private businesses be "certified" should they "directly or indirectly" receive public funds (recall from Chapter 1 41.USC.701, the federal Drug-Free Workplace Act of 1988, which mandated that all businesses "directly or indirectly" receiving federal funds have in place a documented Just-Say-No

program). Moreover, commercial drug testing vendors and their lobbyists would undoubtedly make much use of adverse inference toward those firms that remained "uncertified."

That such as this "Model Drug-Free Private Sector Workplace Act" might be enacted at the state level through federal taxpayer-funded abuse of the § 501(c)(3) charter would be an outrage. Recall from the IRS regulations that one function of the § 501(c)(3) is the "defense of human and civil rights secured by law." The activities of The Alliance represent an attempt to surreptitiously use the very federal government charged with *defending* such rights to subvert them.

We might recall further how Representative Gerald Solomon raged on in Congress not too long ago, angrily calling for revocation of tax-exempt charters of non-profits "supporting drug legalization" and demanding that financial supporters of such organizations be taxed retroactively on their contributions.

Pro-testing lobbying organizations, continued

Drug testing measures are also promoted around the nation at the statehouse level by an organization calling itself the "Institute for a Drug-Free Workplace."[175] A quick review of the Institute's membership roster—which includes some of the major testing vendors—might impel one toward concluding that this organization is, at least in part, a commercial drug testing industry lobbying group.

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[175] Institute for a Drug-Free Workplace, [http://www.drugfreeworkplace.org/], March, 1998.

The Alliance and the "Institute" will no doubt be ramping up ever more feverishly in these legislative arenas in the wake of threats to arbitrary testing posed by developments such as the one reported recently in USA Today:

> Low jobless rate hinders drug policies
>
> By Del Jones, USA TODAY, 6/20/97
>
> Job applicants in South Carolina have become so confident that jobs are easy to find that some are refusing to take pre-employment drug tests. A manufacturer in Arizona has postponed for six weeks the firing of 30 videotaped internal users and sellers of marijuana and cocaine while it seeks replacement hires to keep the plant operating. Last year, that would have been almost unheard of, says Charles Carroll, CEO of ASSET, which contracts with companies to infiltrate the workplace in search of employee drug abuse. "There's been a dramatic change."
>
> The 4.8% unemployment rate in May, lowest in more than 23 years, is good news for workers. But it has forced many employers to relax hiring standards. Drug users usually are screened out by large employers. Drug testing is now used by 95% of Fortune 500 companies. Many smaller companies had started testing because the cost is offset by increased productivity, reduced absenteeism and fewer accidents. Drug use is a factor in employee theft and fraud that cost businesses $400 billion a year.
>
> "Safety is being jeopardized by leaving them on the job," Carroll says. But today's applicants sense they have an advantage and can refuse to submit to drug tests because the company will give them the job anyway, or they'll go down the street, figures Ray Owens of the Federal Reserve's Fifth District in Richmond, Va.
>
> While collecting data for the latest "Beige Book," the Fed's periodic report on regional economic conditions, Owens was told of job prospects refusing drug tests in South Carolina. He was stunned, and is now on the lookout for a trend. "This one caught our eye."
>
> Companies can't reverse drug testing policies overnight without risking discrimination lawsuits, says Clifford Thomas of Pinkerton Services. But Carroll says even Fortune 500 companies are becoming "softer" within their policies. For example, workers are being suspended and quickly brought back after second and third drug offenses rather than being fired. "It wouldn't surprise me if employers

> are loosening their practices to get bodies," Thomas says. Companies are stuck, Carroll says. They must choose between a plant with drug abuse that "runs at 50% efficiency, or having no workers at all."
>
> Thomas says the dilemma will likely worsen in August and September when retailers, normally big on pre-employment drug screening, begin hiring for the holiday season.

Once again we see it taken on utter faith that workplace drug testing has provided effective deterrence and is principally responsible for a decade-long decline in workplace drug abuse incidence. An article in Forensic Drug Abuse Advisor, however, casts doubt on the assumption, concluding that "*[N]o study has ever demonstrated that this decrease (in recent workplace drug abuse rates) is due to the work testing program, nor has it been demonstrated with any certainty that, in commonly used doses, any of the widely abused drugs significantly impacts on job performance.*"[176]

The article goes on to quote JAMA author Craig Zwerling who noted that

> [A] large industry of drug testers has arisen with a financial stake in expanding the market for workplace drug tests. The industry includes the companies that manufacture the equipment and chemicals used in drug testing, the laboratories that carry out the test, the companies that collect the urine specimens, the medical review officers (MRO's) who review the test results, and the consultants who advise companies on drug testing.[177]

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[176] *Fed Panel Says Value of Workplace Drug Testing Unproven*, Forensic Drug Abuse Advisor, Vol. 7, No. 1, [http://www.druglibrary.org/schaffer/Misc/forensic.htm], March, 1998., p. 6.

[177] JAMA, 272 [18] 1467-1468.

This financial imperative is also noted by D. Kim Broadwell in *The Evolution of Workplace Drug Testing: A Medical Review Officer's Perspective*:

> The societal and governmental pressures to foster drug testing programs have led to the development of a substantial drug testing industry. At a conservative cost of $50 per test, direct costs for just the mandated random testing of the 7 million DOT (Dept. of Transportation) workers exceeds $175 million yearly . . . Drug testing service companies, sample collectors, physician MROs, laboratories, employee-assistance programs, and courier services are a few of the vendors who benefit directly from these programs, and this constituency will continue to support drug and alcohol testing programs that further its economic interests.[178]

Which is why we have dubious "Alliances" and "Institutes" forever fanning the flames of a questionable workplace drug abuse "crisis."

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[178] D. Kim Broadwell, *The Evolution of Workplace Drug Testing: A Medical Review Officer's Perspective*, The Journal of Law, Medicine, and Ethics, Vol. 22:3 Fall 1994, pp. 244.

APPENDIX B

War on Drugs and drug testing updates
in the wake of *Chandler*:

Gerald Solomon Watch, 1997
105th Congressional Update

Conservative New York Republican Representative Gerald B.H. Solomon, renewing his 104th Congress drug war agenda, has re-introduced a spate of random drug testing and related drug war legislative proposals in the first session of the 105th Congress:

- *House of Representatives 88*, denial of federal education benefits for those convicted of drug offenses.
- *House of Representatives 89*, pre-employment drug testing of all federal job applicants.
- *House of Representatives 90*, random testing of Executive Branch personnel.
- *House of Representatives 92*, random testing of Judicial Branch personnel.
- *House of Representatives 309*, to prohibit the use of any federal funds for research into drug legalization issues.
- *House of Representatives 310*, random testing of Legislative Branch personnel.
- *House of Representatives 313*, to eliminate court discretion in connection with denial of various federal benefits for those convicted of drug offenses.

- *House of Representatives 314*, the "Drug Kingpin Death Penalty Enhancement Act."
- *House of Representatives 333*, to require that courts notify employers of employee drug offense convictions.

Mr. Solomon is also against gun control, for legislation outlawing the pandemic of flag-burning, against use of the internet to disseminate drug legalization information, and for denying tax-exempt status to non-profit organizations "favoring drug legalization" (and retroactively taxing those who have contributed to such organizations).

On October 7, 1994, however, Mr. Solomon stated the following during the course of remarks concerning house debate over "Unfunded Mandates" legislation: "*Today is the beginning of the second Reagan Revolution that will shrink the size and power of the federal government. No longer will there be an arrogant attitude around here that says Big Brother federal government knows best.*" (see Congressional Record, 10-7-94)

Newt Gingrich watch, 1997

House Majority Leader Newt Gingrich (R-GA), determined that he not be outdone in the drug war rhetoric department, is again calling for legislation requiring life imprisonment and the death penalty for certain drug offenses:

> Gingrich Drug-free by 2001
>
> House Speaker Newt Gingrich says he plans to move full steam ahead in an effort to eradicate drugs, the Associated Press reported May 8. Speaking before the National Religious Broadcasters in Washington, Gingrich said he hopes to eradicate the drug problem by Jan. 1, 2001. The end result would mean "such an amazingly

> healthier society," he said. "That would be a vastly greater achievement than the balanced budget."
>
> Talking specifics, Gingrich is proposing a mandatory life prison term for those who cross borders with or produce commercial quantities of illegal drugs. He would also like to see the death sentence imposed for repeat offenders. "If you sell it, we're going to kill you," he warned. To also help conquer the drug problem, Gingrich said he would like Air Force reconnaissance planes to monitor drug trafficking, and for federal funds to implement faith-based rehabilitation programs.[179]

Never one to shrink from Herculean tasks, Mr. Gingrich proposes to eradicate in four years the millenias-old human appetite for intoxication. Interestingly, his legislative definition of "commercial quantities" of illicit drugs is "100 times the normal dose," so the hapless college student or street-level dealer caught with, say, marijuana sufficient to roll 100 joints becomes a "Drug Kingpin" eligible for the most severe of sanctions.

We will leave aside the logistical question of how an offender gets to commit the second, "capital" offense, after receiving life (presumably without parole) for the first episode of drug possession or sales under the Gingrich proposal.

June 10, 1997 Associated Press Update:

> Consider this: Charles Manson has been found guilty of trafficking in drugs in prison and has been ordered into the isolation tank. Manson was selling and using drugs, and twice tested positive for narcotics. Which raises a question about Newt Gingrich's plan to essentially eradicate drug use in the United States by 2001. If you

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[179] 05/09/97 Source: Join Together Online, [http://www.jointogether.org/], March, 1998.

> can't keep drugs out of the hands of maximum-security prisoners, how can you prevent them from crossing the porous borders? Just asking."[180]

June 1997 update: Clueless in Carson City

The Nevada Legislature recently considered Senate Bill 371, which would explicitly authorize all employers in the Silver State to enact suspicionless drug testing programs (as if they needed legislative authorization: Nevada already leads the nation in employee surveillance, and drug testing has long been virtually universal in major employment sectors here). The bill provides for, among other things, termination of any employee refusing to submit to testing, and once again reaffirms that the drug test has controlling force in hiring decisions (Section 11.1), Title VII notwithstanding.[181]

SB 371 mandates that employers who test must inform employees that illegal drugs are—well—*illegal* (Section 9.2), that employees testing positive must agree to be remanded to "treatment" or be fired (Section 22.1), and that employers with drug testing programs be accorded a 5% reduction in employee health benefit expenses. This latter provision (Section 26.2) sounds suspiciously like a "Nevada Clinical Laboratories Relief Act of 1997," wherein revenues are re-routed from insurers to laboratories courtesy of the legislature.

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[180] Las Vegas Review-Journal, June 12th, 1997.

[181] Nevada Senate Bill 371, [http://www.leg.state.nv.us/97bills/SB/SB371.HTM]

SB 371 contains nothing regarding epidemiological or economic criteria justifying enactment of drug testing programs (read it: click on the link above); it cannot be other than one more piece of "Jars Wars" lawmaking, symbolic in intent, in direct contravention of the recent *Chandler* Supreme Court decision cited above.

Drug testing errata:

- Item: Drug testing initiatives have resurfaced in school systems around the nation, mostly notably in Dade County, Florida in the fall of 1997. Unlike the program imposed in Oregon, which precipitated the Supreme Court case *Vernonia School District 47J v. Acton et ux* (Docket 94-590, 1995), the Florida random testing includes all students, not just student athletes.

- Item: Drug testing critics lost another court battle recently when the U.S. Supreme Court, without comment, declined to hear the appeal of a California decision upholding the right of the City of Glendale to require drug testing of job applicants and employees up for promotion. Inexplicable, in light of *Chandler*.

- Item: In October of 1997, the Executive Director of the Illinois Crime Commission decided it was time to take illicit drug use matters into his own hands:

> Group Wants to Drug-Test Illinois Politicians
>
> Politicians in Illinois will be asked to voluntarily take random drug tests by a group that says it wants to "keep everyone honest," the Chicago-Sun Times reported Oct. 7. The challenge comes from the Illinois State Crime Commission.

> "It's either put up or shut up," said Executive Director Jerry Elsner. "We have lost the war on drugs. Now let's see who's using the drugs and who's not." The challenge will appear in an editorial in the first issue of the Commission Reports, the anti-crime organization's newspaper. Political figures who agree to submit to such tests will have their names published in the newspaper. Those who refuse to take a drug test will also have their names in print. "The agreement is that we can show up at anytime, any place," Elsner noted. "It could be after one of your fund-raisers or while you're coming out of church."
>
> Elsner added that state senators and representatives, as well as those running for higher offices, will be receiving a formal request by mail in the next few weeks. One lawmaker already commenting on the upcoming challenge is Rep. Barbara Flynn Currie (D-Chicago), who says although she personally does not support random drug-testing, she will agree to it if her constituents say yes. "But I don't think random tests are a good way to fight drug abuse. I don't think the findings in this population, like others, would be dramatic or interesting," said Currie.[182]

Critics might observe that Mr. Elsner's plan is neo-McCarthyism to the core. It is, however, quite in keeping with the blatantly unconstitutional "prove-your-innocence" attitude and legislative proposals of U.S. Congressman Gerald Solomon, who has tried to have refusal to submit to arbitrary drug testing made a violation of federal law, for which one would be summarily declared as having tested positive.

- Item: Louisiana Task Force Proposes Sweeping Drug Tests

> In Louisiana, the governor's drug-testing task force has recommended that $5 million dollars be set aside each year to test welfare recipients, elected officials and state college students for illicit substances. The task force was appointed after legislators approved a drug-testing law several months ago, Reuters reported Nov. 4.
>
> In response to the recommendations, a spokesman for the Louisiana State University Board of Supervisors said, "It seems that would be patently unconstitutional, at the very least."

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[182] Source: JoinTogether Online, 10/17/97, [http://www.jointogether.org/]

> A spokesman for Republican Gov. Mike Foster said it would take about a week for the governor and his staff to analyze all the recommendations.[183]

As should be apparent from the foregoing, the legal and political wrangling over the issue of suspicionless drug test is unlikely to abate in the foreseeable future.

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[183] Source: JoinTogether Online, 11/05/97, [http://www.jointogether.org/]

GLOSSARY

Accuracy: Closeness of agreement of a measurement with an authoritative reference standard. Not the same as "precision." It is important to remember that, beyond the counting of discrete objects, there is no such thing as an "exact" value; reference standards are often themselves arbitrary or estimates derived by *other* measurement(s). For example, laboratory reference standard solutions distributed by authoritative sources such as NIST (the National Institute for Standards and Technology) are usually expressed as an average concentration of an analyte ± some small percent "error" or variability in the originally supplied container.

Aliquot: The portion of a laboratory specimen prepared for analysis.

Analyte: The chemical substance of interest in a laboratory analysis. Also sometimes called a "parameter."

Bioassay: Laboratory analyses of biological substances.

Blank: A sample "known" not to contain the analyte of interest. There are numerous types of blanks, e.g.: "DI blanks," those containing nothing but distilled ("de-ionized") water; "trip blanks," those transported with samples to control for contamination in transit; "matrix blanks," samples of the actual material (e.g., urine, blood, hair, etc.) "known" not to contain the analytes under investigation.

Cohort: A statistically or clinically relevant group or category within a larger population.

Correlation: Statistical relationship wherein two or more measured phenomena "co-relate" or vary in a more or less systematic fashion ranging from zero (no relationship) to + 1.0 (perfect 1:1 direct relationship) or – 1.0 (perfect 1:1 inverse relationship). Correlation "coefficients" are expressed as percentages. Correlation is often confused with causation. For example, shoe size correlates "significantly" with hat size, but large feet do not "cause" large heads.

Cross-reactivity: Substances with molecular structures similar to those of target analytes are said to be "cross-reactive," meaning they could be mistaken for the target analytes, given that they react in similar fashion to the laboratory methods, resulting in false positive determinations.

Cut-off concentration: An administrative concentration level above which sample analysis results for the target analytes are declared to be "positive,' and below which they are deemed "negative" (called "qualitative" analysis: See "Quantitation" below). Usually set well above the Minimum Detectable Concentration (MDC, see

below) of the analytical method in commercial labs to guard against false positive errors.

CV (Coefficient of Variation): The ratio of the standard deviation to the mean. In plain English, the expected, or average variability of a set of measurements around the average itself, expressed as a percentage. See Standard Deviation and RSD below.

DW (Detection Window): The period after consumption of a substance such as a drug during which the resulting "metabolite(s)" is/are detectable in a specimen such as urine, blood, saliva, or hair. The DW for cocaine metabolite in urine, for example, is 1-2 days, whereas the DW for marijuana metabolite is on the order of 30 days. One major drug testing vendor tellingly now refers to the DW as the "SW," or "Surveillance Window."

Epidemiology: The scientific study of characteristics and transmission pathways of diseases in large populations.

False negative: Test result finding no analyte of interest in a sample when it was actually present at a measurable level.

False positive: Test result finding an analyte of interest in a sample when it was actually *not* present. "False accusation" in the context of illicit drug testing.

GC/MS (Gas Chromatography/Mass Spectrometry): The most accurate and precise laboratory technology used in commercial drug testing labs. GC/MS is generally assumed to be "forensic" quality, i.e., sufficiently reliable for use as criminal evidence.

Immunoassay: Laboratory technology employing genetically engineered antibody substances which compete for "binding" with the target analyte(s) during laboratory processing. The presence or absence of an analyte is indirectly inferred from the antibody concentration after processing.

Incidence: Epidemiologically, the number of new cases of a disease observed during a specified period.

Matrix (*pl.* Matrices) : The material of the specimen. Urine, blood, saliva, hair, and tissue are all bioassay matrices.

MDC (Minimum Detectable Concentration): The lowest concentration level at which a chemical substance can be reliably assayed.

Mean: The arithmetic average of a set of measurements. A "concentration level" of a substance, often expressed in "ng/mL." (nanograms per milliliter) is an estimate of a "mean" or average concentration.

Metabolite: Biochemical derivatives of originally ingested substances. Drug test assays attempt to quantify the metabolites of drugs initially consumed, not the chemicals present in the drug themselves at the time of consumption.

Nanograms per milliliter (ng/mL.): Billionths of a gram ("nano") per thousandths ("milli") of a liter. The conventional unit of analysis in drug bioassay.

Normal distribution: A distribution of a set of measurements in which the mean is located at the mid-point and the variability is symmetrically dispersed above and below the mean in decreasing proportions. Sometimes referred to as the "Bell Curve" or "Gaussian Distribution."

Operational Definition: Defining a phenomenon according to measurable criteria.

Precision: Closeness of agreement of repeated measurements of the same object or substance. Not the same as "accuracy."

Prevalence: Rate. The proportion or percentage of a population with a characteristic (e.g. drug use, cancer, diabetes, etc.) of interest.

Quantitation: Laboratory analysis yielding a numerical estimate of a concentration level of an analyte. "Qualitative" analysis, on the other hand, simply reports "positive" or "negative" according to operational criteria.

Radioimmunoassay: Immunoassay in which a radioactive "internal tracer" is added to the sample. The analyte presence or absence is indirectly inferred by counting the remaining radioactive disintegrations after processing.

RSD (Relative Standard Deviation): Same as the CV (Coefficient of Variation): The ratio of variability (the Standard Deviation) to the average, or "expected value."

Replicate: Take a sample specimen, divide it into multiple "aliquots," analyze them all using the same method, and you have performed "replicate" analysis.

Sensitivity: The ability of a test method to correctly identify true positives. A test that is highly sensitive is frequently also prone to yielding a high proportion of false positives. Analogy: if police arrest everyone in an area, they will surely apprehend all of the otherwise undetected criminals at large, but at a cost of detaining many innocent people (false positives).

Specificity: The ability of a test method to correctly identify true *negatives*. Methodologically the inverse of "sensitivity." In any assessment, there is always a sensitivity-specificity trade-off. Simultaneously maximizing sensitivity and specificity is not easily accomplished: expensive, in a word.

Spike: A sample adulterated with a "known" quantity of a reference standard. As with blanks, there are various types—e.g., "DI spikes," (reference solution in distilled water) or "matrix spikes," actual specimens assumed to be absent measurable concentrations of the target analyte(s).

Standard Deviation: The "average" variability of a set of measurements around the average itself. Sometimes called the RMS or Root Mean Squared Deviation, because it is derived by squaring all variations around the mean, adding them up, and then

calculating the square root of the sum. Denoted mathematically by the Greek symbol "sigma," (σ), the Standard Deviation is often simply called "the sigma."

Stratum (*pl.* Strata): A category of interest for purposes of analysis. See "cohort." in the context of drug testing, some strata would be, for example: Unskilled males age 18-25 in the construction industry; management females age 35-45, banking industry; airline pilots (predominantly male), semi-retiree Wal-Mart greeters, etc. One area of statistical analysis generally glossed over in drug abuse research is that of "stratification," i.e., objectively assessing disparate cohorts to avoid making overbroad generalizations that result in ineffective policy.

Vector: In Epidemiology, a "vector" is a disease carrier. Economically and socially successful illicit drug users are regarded by some drug abuse policymakers as "addiction vectors."

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VITA

Graduate College
University of Nevada, Las Vegas

Robert E. Gladd

Local and Home Address:
6529 Fresh Meadows Lane
Las Vegas, Nevada 89108

Degrees:
Bachelor of Arts, Psychology, 1985
University of Tennessee, Knoxville, Tennessee

Publications:
Dillard, James W., Ph.D., Gladd, Robert E., and Hutton, Vicky, *Laboratory Software Applications Development: Quality Assurance Considerations*, Conference Proceedings, 34th Annual Conference on Bioassay, Analytical, and Evironmental Radiochemistry (Las Vegas NV, USEPA/SAIC/REECO, October 17-21, 1988).

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Thesis Title:
Toward Effective and Ethical Drug Abuse Prevention Policies: The Case Against Indiscriminate Drug Testing

Thesis Examination Committee:
Chairman, Jerry L. Simich, Ph.D.
Committee Member, Craig Walton, Ph.D.
Committee Member, Gary L. Jones, Ph.D.
Graduate College Representative, Margaret Louis, Ph.D.

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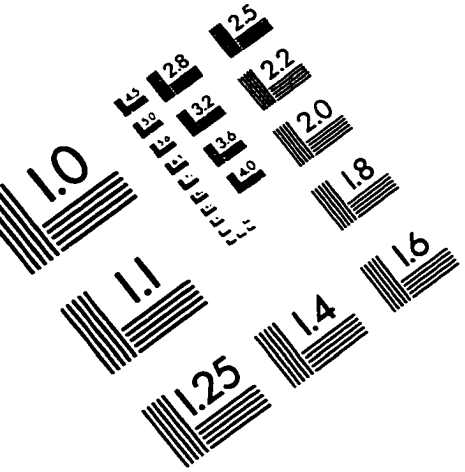

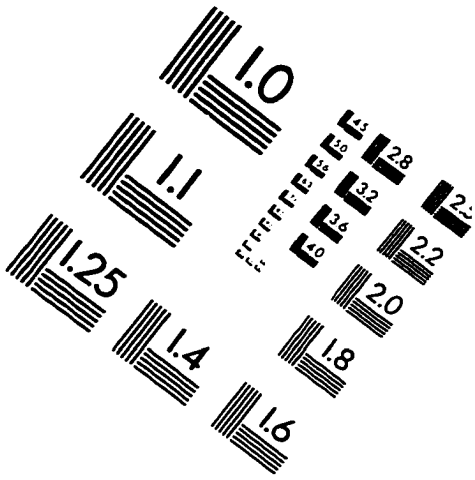

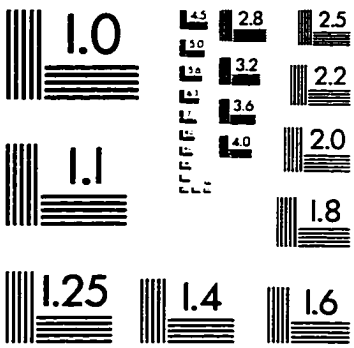

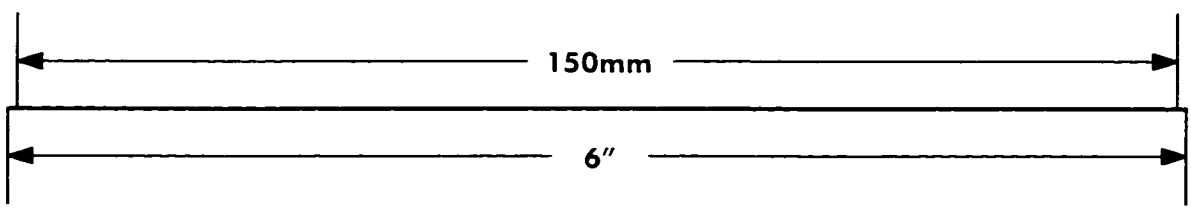

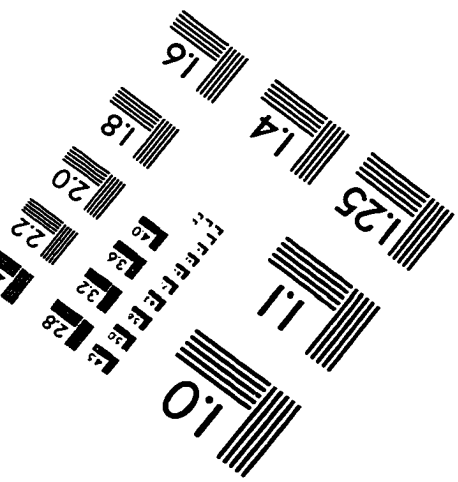

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