Critique: No Soul In The New Machine: Technofallacies In The Electronic Monitoring Movement

Justice Quarterly, Vol. 8 No. 3. September 1991. An earlier version of this paper was presented at the Annual Meeting of the American Society of Criminology, Baltimore, 1990.

Ronald Corbett
Massachusetts Department of Probation

Gary T. Marx
Massachusetts Institute of Technology

It's a remarkable piece of apparatus. **- Opening line, *ThePenal Colony,* by Franz Kafka**

Since its legendary inception in the mind of a New Mexico judge inspired by Spiderman comics, the use of electronic monitoring as a correctional tool has grown in a manner most often described as "explosive" (U.S. Dept. of Justice 1990). From very isolated use in 1984, the use of electronic monitoring (hereafter EM) has expanded to at least 33 states (ACA 1989), with a threefold increase during 1988 alone (Schmidt 1989).

Although hardly a mature industry, EM has attracted a growing number of manufacturers now totaling at least 14 (Tonry and Will 1989). For the last several years, exhibition areas at the annual conference of the American Probation and Parole Association have been occupied almost entirely by vendors of new technology, most of it EM equipment.

Clearly, EM has arrived on the correctional scene and has drawn much attention. Significant research findings regarding its impact recently have begun to come in. These studies have intensified the debate about the proper place of EM in criminal justice. In this paper we locate EM in the context of broader societal developments regarding surveillance, and we argue that unfortunately it has fallen prey to a series of technofallacies which undermine practice. Viewing the current electronic monitoring frenzy from the perspective of several decades of observing and participating in the correctional process, we have Yogi Berra's sense that "it's deja vu all over again," as yet another panacea is offered to criminal justice without adequate thought or preparation.

We address both academic and practitioner audiences. The former will recognize the sociological perspectives of unintended consequences, irony, and paradox (e.g., Marx 1981; Merton 1967; Seiber 1982) as applied to a new area We hope that the latter-those who develop and administer policy-will gain from this presentation by seeing that innovations never stand alone and that avoidance of the fallacies identified here can mean improved practice.

The New Surveillance

The development of EM in the 1980s not only is a response to specific factors (to be discussed below), but also reflects broader changes in surveillance. It must be viewed along with drug testing, video and audio surveillance, computer monitoring and dossiers, night vision technology, and a rich variety of other means that are changing the nature of watching.

Although these extractive technologies have unique elements, they also tend to share certain characteristics that set them apart from many traditional means. Some of the ethos and the information-gathering techniques found in the maximum-security prison are diffusing into the broader society. We appear to be moving toward, rather than away from, becoming a "maximum-security society." 1

Such a society is transparent and porous. Information leakage is rampant. Barriers and boundaries distance, darkness, time, walls, windows, and even skin, which have been fundamental to our conceptions of privacy, liberty, and individuality-give way.

Actions, as well as feelings, thoughts, pasts, and even futures, are increasingly visible. The line between the public and the private is weakened; observations seem constant; more and more information goes on a permanent record, whether we will this or not, and even whether we know about it or not. Data in many different forms, from widely separated geographical areas, organizations, and time periods, can easily be merged and analyzed.

Surveillance becomes capital- rather than labor-intensive. Technical developments drastically alter the economics of surveillance such that it becomes much less expensive per unit watched. Aided by technology, a few persons can monitor many people and factors. The situation contrasts with the traditional gumshoe or guard watching a few persons and the almost exclusive reliance on firsthand information from the unenhanced senses.

One aspect of this efficiency, and the ultimate in decentralized control, is self or participatory monitoring. Persons

watched become active "partners,, in their own monitoring. Surveillance systems may be triggered directly when a person walks, talks on the telephone, turns on a TV set, takes a magnetically marked item through a checkpoint, or enters or leaves a controlled area.

There is an emphasis on the engineering of control, whether by weakening the object of surveillance (as in the case of EM) or by hardening potential victims (as with access codes or better locks). Themes of prevention, soft control, and the replacement of people with machines are present. Where it is not possible to prevent violations physically, or when that process is too expensive, the system may be engineered so that profit from a violation cannot be enjoyed, or so that the violator is identified immediately.

As the technology becomes ever more penetrating and more intrusive, it becomes possible to gather information with laserlike specificity and spongelike absorbency. If we consider the information-gathering net as analogous to a fishing net, then, as Stanley Cohen (1985) suggests, the mesh of the net has become finer and the net wider.

Like the discovery of the atom or the unconscious, new techniques bring to the surface bits of reality that previously were hidden or did not contain informational clues. People, in a sense, are turned inside out; what was previously invisible or meaningless is made visible and meaningful. Electronic monitoring and the forms that increasingly accompany it, such as video identification and drug/alcohol testing, are part of this qualitative change in monitoring. The home is opened up as never before. In focusing on the details, we must not forget that they are part of a much broader group of changes.

Ten Technofallacies Of Electronic Salvation

New public policies are based partly on politics and interests, partly on empirical assessment, and partly on values. Unfortunately, wisdom too often plays only a modest role.

EM must be approached cautiously, or the stampeding herd may fall off the cliff. Before technical solutions such as monitoring are implemented, it is important to examine the broader cultural climate, the rationales for action, and the empirical and value assumptions on which they are based. Policy analysts must offer not only theories, concepts, methods, and data, but also-one hopes-wisdom. Part of this wisdom consists of being able to identify and question the structure of tacit assumptions that undergird action.

In the analysis of new surveillance technologies, Marx (1990, forthcoming) identifies a number of "tarnished silver bullet techno-fallacies" that characterize many recent efforts to use technology to deal with social issues. Some of these apply to the case at hand. In critiquing the EM movement, the following discussion draws on and expands this more general framework. We discuss ten such fallacies:

1. The fallacy of explicit agendas;
2. The fallacy of novelty;
3. The fallacy of intuitive appeal or surface plausibility;
4. The fallacy of the free lunch or painless dentistry;
5. The fallacy of quantification;
6. The fallacy of ignoring the recent past;
7. The fallacy of technical neutrality;
8. The fallacy of the 100% accurate or fail-safe system;
9. The fallacy of the sure shot;
10. The fallacy of assuming that if a critic questions the means, he or she must be opposed to the ends.

1. The fallacy of explicit agendas. This entails assuming that new programs are developed for their declared purpose and/or that there is a clearly developed purpose. It also assumes that the ostensible reasons for policy decisions are the real reasons rather than a mask for a decision based on other considerations (e.g., fiscal or political). In the case of EM the goals are varied, contradictory, and shifting, and sometimes hide other goals.

An important theme in contemporary corrections (Petersilia, 1990; Tonry and Morris 1990) is the emphasis placed on proportionality or symmetry in sentencing. It is argued that traditionally, little in the way of penal sanctions "between probation and prison', has been available. No appropriate sanction exists for offenders who occupy the middle ground on a scale of severity of deserts. Liberals and conservatives alike have found appeal in this argument. A major rationale for EM is that it is an intermediate sanction which promises simultaneously to lighten onerous penalties and to increase lenient ones.

Nevertheless, EM has a number of other goals, sometimes acknowledged informally but rarely stated officially or in public. Policy disasters are more likely to occur when the declared purposes of a program are supplemented privately or eclipsed by additional, even contrary, objectives. With regard to EM, the foremost of these objectives is a powerful financial imperative.

In the late 1970s and early 1980s a "get tough" approach to sentencing offenders emerged from the presumed demise of the rehabilitative ideal. This was reflected first in the rhetoric of public officials and then in a spate of sentencing reform schemes, all pointing toward stricter and more certain punishment. Predictably enough, this approach put a tremendous strain on existing prison stock, and is an important cause of the decade-long prison overcrowding crisis.

Although building more prisons seemed the obvious solution, here again the agenda was by no means clear or uncomplicated. Prisons are very expensive institutions, averaging (in 1987 dollars) between $50,000 and $75,000 per new cell for construction and $14,000 for imprisoning one offender for a year (Petersilia 1987). "Get tough" suddenly meant "Go broke!" The goal of sentencing severity gave way fairly quickly to the goal of fiscal stability. As Petersilia reported, this financial concern became "the bottom line in deciding what to do with lawbreakers" (1987:xi).

Compounding the financial crisis was a nascent legal crisis of constitutional dimensions, brought on by overcrowded conditions in prisons. So serious was this situation that by 1987, 37 states were subject to judicial orders to address illegal conditions in their institutions (Petersilia 1987).

The conservative trend in sentencing philosophy potentially was jeopardized by an emerging legal/fiscal crisis. If these multiple and conflicting goals were to be served, clearly it would be necessary to develop a program that would sound tough while also reducing and relieving overcrowding. Thus were born "sentencing alternatives," which in time would be renamed "intermediate sanctions" and, most recently, "intermediate punishments," of which EM is perhaps the leading example. Pressure was put on probation to remake itself. State correctional administrators looked to the lower-cost option to bail them out. Offenders who might be incarcerated under the prevailing philosophy would now, of necessity, face technologically enhanced home imprisonment, which was believed to cost only one-third as much as prison.

Another equally powerful (if less noted) agenda item-a desire to enhance the public image of probation-was also present. Internally, the probation profession was feeling pressure to make itself more palatable in conservative times. Consequently the field adopted rhetoric that was, in Clear and Hardyman's view, "unabashedly fierce," emphasizing qualities of toughness, strictness, and harshness (1990: 46). In the face of a public relations crisis, wherein probation was depicted as pathetically soft, it became politically wise to put on a meaner face and develop a more punitive approach. Probation would seek to pack the same punch as prison, minus the expensive bricks and mortar, by launching programs involving intensive supervision, boot camps, shock incarceration, and home confinement with electronic monitoring.

If EM has not worked in an empirical sense to date, as the incoming evidence suggests, that failure might be traced, at least in part, to this melange of shifting and conflicting goals.

2. The fallacy of novelty. This fallacy entails the assumption that new means are invariably better than the old. Decisions are often based on newness rather than on data suggesting that the new will work or that the old has failed. The symbolism of wanting to appear up-to-date is important.

The fallacy of novelty is related to a "vanguard" fallacy: "If the big guys are doing it, it must be good." Smaller organizations copy the actions of the larger or more prestigious organizations in an effort to appear modern.

The field of corrections often has been accused of being in constant thrall to fads and panaceas (Finckenauer 1982). Technofix attitudes unfortunately have become the knee-jerk response of our society to complex issues whose causes are social, not technical. In a theme with solid roots in American history, newness is equated too quickly with goodness. New technology is inherently attractive to an industrial society. It's risky to be against new technology, however mysterious its operations or recondite its underlying engineering. Technical innovation becomes synonymous with progress. To be opposed to new technology is to be a heretic, to be old-fashioned, backwards, resistant to change, regressive, out of step. Reinecke observes sardonically, "To fall behind in the great technorace is to demonstrate a pathetic unwillingness to change with the times, to invite universal ridicule, and to write a recipe for economic disaster" (1982: 13).

Agency administrators become fond of the new and the original as a matter of careerism and survival. Fast-track reputations are more likely to be built on introducing new programs than on maintaining the old; few professionals want to be regarded as caretakers. Invitations to speak at conferences, media coverage, job offers, and, most significantly, the availability of grant money depend on the implementation of novel approaches. Questions about the fit of the innovation with the agency's mission and goals or about the existence of empirical support for the innovation will be considered mere details in the face of these forces. This point leads directly to our next fallacy.

3. The fallacy of intuitive appeal or surface plausibility. Thisentails the adoption of a policy because "it sure seems as if it would work." The emphasis is on commonsense "real-world" experience and a dash of wish

fulfillment in approaching new programs. In this ahistorical and anti-empirical world, evaluative research has little currency.

The models for rational policy development taught in schools of public administration advance the notion that in the domain of social policy, research and evaluation determine policy. Unfortunately, these models usually bear little resemblance to actual occurrences in corrections practice. Finckenauer (1982) refers to a tendency for agencies to ignore evidence of program failure if the ideological "spin" is right. Clear and Hardyman (1990) speak of a rush to embrace intensive probation supervision when the evidence supporting such adoption is "weak." Tonry and Will cite administrators who proliferate programs and believe in their efficacy, even in the absence of careful evaluations. They note that "in a field (community corrections) . . . in which few rigorous evaluations have been conducted, the persuasive force of conventional but untested wisdom is great" (1990: 29).

Enthusiasm for EM programs runs high, even when data that call them into question are available. Petersilia's three-county random-assignment experiment involving EM in California found the following: "The highest technical violation and arrest rate occurred in the Electronic Monitoring Program in Los Angeles. About 35% of participants in the program had a technical violation, and 35% an arrest, after six months" (1990: 105). Probation with EM was found to result in rearrest rates identical to those of offenders under regular supervision.

An Indianapolis study released in 1990 compared the effectiveness of EM with that of human monitoring. No significant differences were found between the two methods. The study revealed, however, that nearly 44 percent of all participants "sneaked out" on the monitoring (Baumer and Mendelsohn 1990).

In Irwin's (1990) report on the use of EM in the Georgia IPS program, she concludes that it was a failure and that it seemed to exacerbate recidivism rates. Palumbo, Clifford, and Snyder-Joy (190) report that in an Arizona EM study concentrating on cost-effectiveness, the evidence suggests that EM did not reduce and might very well increase overall correctional costs due to net widening.

Just as innovations are promoted without regard to supporting data, so can traditional approaches be abandoned casually with a lack of evidence. In the late 1970s and early 1980s it became the conventional wisdom that rehabilitation was a failure and that programs aimed at reforming offenders were bankrupt. EM and other "get tough" approaches to community corrections flourished in this environment, as the emphasis shifted toward punishment and deterrence.

Again, it is remarkable how little this conventional wisdom was supported by the available research. Byrne (1990), in an overview of intensive supervision programming, inveighs against systems that blindly negate or minimize the importance of treatment interventions and overestimate the impact of control-oriented interventions such as EM. Petersilia's methodologically rigorous study reports, as its only *positive* finding, that lower recidivism rates were found "among those ISP offenders who were fortunate enough to receive some rehabilitative programming" (1990: 3). In a major study of the effects of a sanctioning approach versus a treatment approach in reducing recidivism, Andrews and his colleagues (1990) found that across 80 different studies, criminal sanctioning without the provision of rehabilitative services did not work and that only programs incorporating principles of rehabilitation reduced recidivism significantly. They conclude, "There is a reasonably solid clinical and research basis for the political reaffirmation of rehabilitation" (384).

4. The fallacy of the free lunch or painless dentistry. This fallacy involves the belief that there are programs which will return only good results without any offsetting losses. It ignores the existence of low-visibility or longer-range collateral costs, and fails to recognize that any format or structure both channels and excludes.

In the making of public policy, new ideas all too often drive out old ideas, irrespective of their merit. New programs draw attention and resources away from the traditional efforts. This situation can entail significant opportunity costs. Personnel and other resources will be allocated to the innovation, often starving (or undernourishing) existing programs. Over time, the conventional ways of doing business may suffer from choked-off budgets and the retention of less competent staff members who have been excluded from the new, high-priority program. Such persons also may be angry about not being included in the new programs.

Eventually this "Gresham"-style effect may develop a self-fulfilling quality. Whatever the merit of conventional programs, they become defenseless against the drain of resources into the innovation. Conversely, the innovation, whatever its merits, is provided with an introduction under the most favorable circumstances (ample start-up funds, generous publicity, an elite, hand-picked staff). This makes for an unrealistic test of its potential under normal non-"hallo" conditions.

The EM movement illustrates these dynamics nicely. Clear and his colleagues (1987), in their review of three intensive supervision projects, discuss the "secondary place" taken by treatment efforts when control is emphasized. Irwin, in discussing the use of EM in Georgia, observes that although the technology makes the control function easier, "at the same time [it] may make more difficult the part of the job that involves the

motivation of offendersand gaining their cooperation" (1990: 73). Palumbo and colleagues conclude that because the program is sold on the basis of its capacity to control offenders, treatment becomes at best an "add-on": "Under these conditions, there is likely to be little if any real treatment provided" (1990: 16).

5. The fallacy of quantification. When this fallacy is operating, costs and benefits and the value of goods and services are defined in a manner that gives priority to those things which can be measured easily. In a related fallacy, seemingly attractive means can serve to determine the end, rather than the reverse.

One potentially attractive feature of EM systems for administrators and line officers alike is its seeming operational simplicity. EM is a comparatively straightforward process, easy to learn, implement, and monitor. In this respect it stands in sharp contrast to the traditional "casework" approach to probation.

Traditional probation supervision might be characterized as counseling with an edge. It resembles social work plus the complications of coercion and involuntariness. Although offenders clearly prefer probation to prison, they could hardly be said to embrace the experience in the same way, for instance, as mental health "clients" may embrace therapy. Probation officers work in the shadow of the prison cell and can arrange for the imprisonment of intractable offenders. Simultaneously they are expected to remediate a range of profound personal difficulties (e.g., drug abuse, illiteracy, mental illness, joblessness) that are pushing the offender toward crime. Therefore, they are charged with hating the sin and loving the sinner. They have a dual role-cop and counselor-which is often misunderstood, if not resented, by offenders, who correctly sense the mixed message.

The complexity and the contradictory nature of the job are compounded by the "technical uncertainty" (Thompson 1967) inherent in the role. Traditional casework is assumed to be an imprecise science at best, even though a line of research by Andrews and colleagues (1980, 1986, 1990) has established a strong empirical foundation for effective supervision. Clear and Gallagher suggest that in the face of this technical uncertainty, "officers will tend to select conservative practices in offender management" (1985: 426)

The EM movement reconceptualizes the task before the probation officer as more mechanical and more concrete: install equipment, test, monitor, record, and respond. Redefining the goal as offender surveillance through technology eliminates the professional anxiety and guesswork endemic to the casework approach. EM minimizes, if it does not eliminate, the discretionary judgment and complex analysis required of the treatment model and replaces it with responsibilities akin to those of a clerk/technician.

EM also makes the manager's job less taxing. The traditional approach requires consider-able investment in staff training in a variety of higher-order skills (interpersonal communications, personality assessment, diagnostic protocols, crisis intervention, substance abuse assessment and referral). Supervising staff members with these responsibilities is difficult, as is the related task of setting performance criteria and organizational goals.

Small wonder, then, that organizations will find the relatively uncomplicated world of EM attractive. What had been nebulous and "soft" in casework systems becomes quantifiable and concrete with EM. If only it worked! A major change in the probation officer's job is being introduced without broad discussion, simply as an artifact of a seemingly simple technology.

6. The fallacy of ignoring the recent past. For the case at hand, this fallacy involves denying the possibility that EM might be just another corrections fad. Of course this characterizes nontechnical reforms as well. Yet whether from genuine enthusiasm or as a political strategy, those caught up in the excitement and the high stakes of promoting a reform often wear historical blinders. They do so at their peril.

The intense interest in EM has all the earmarks of a fad- broad media attention, quick, widespread adoption, rapid expansion and diversification of the product. Even a superficial familiarity with the recent history of community corrections should encourage a skeptical, or at least a go-slow, approach.

The history of the last 20 years of community corrections is punctuated at about five-year intervals by the appearance of new "panaceas," typically arriving suddenly and attracting enormous attention. The bad news is that they tend to disappear just as quickly. Examples include pretrial diversion in the late 1960s, mandatory sentencing in the mid-1970s, and intensive probation supervision (IPS) in the early 1980s. Their trajectory has been roughly similar: great early enthusiasm, widespread adoption, less-than-positive evaluations followed by disillusionment, and finally downscaling or elimination and receptiveness to the next panacea.

7. The fallacy of technical neutrality. This involves the assumption that technology per se is morally and ethically neutral; that any piece of machinery can have both good and bad implication' *depending on how it is used.* This fallacy can stop critical thought. It ignores the fact that the technology is always developed and applied in a social context which is never neutral.

EM technology is morally distinguishable from a microchip for example. It is meant as a form of human restraint and tracking; with few exceptions, it has been used to incarcerate people in their own homes. Thus the moral rub.

In a democracy, the concept of "home" is a near-national icon home represents a refuge, a sanctuary, the last bastion of privacy The walls of a home have been thought to serve as an impermeable barrier, inviolate in defining the line between public and private domains. The Fourth Amendment incorporates this understanding into law: it admonishes the state that in a free society, it is to have little dominion over and very limited intrusion into the activities within a home.

With EM the home becomes deprivatized. The intrusion is telemetric and nearly invisible, and, as such, perhaps more insidious (Marx 1989). We have progressed from first-generation equipment that simply monitored physical presence, through emissions transmitted over telephone lines, to more recently manufactured equipment that allows for visual inspection and telemetric alcohol tests Tonry and Will (1989) report that two-way video transmission soon will be cost-effective for use in home confinement programs.

The use of EM typifies trends toward decentralization of social control. Figuratively, prisons have been dismantled, and each individual cell has been reassembled in private homes. Once homes start to serve as modular prisons and bedrooms as cells, what will become of our cherished notion of "home"? If privacy is obliterated *legally* in prison and if EM provides the functional equivalent of prison at home, privacy rights for home confinees and family members are potentially jeopardized.

What price intermediate sanctions? In finding feasible alternatives to traditional incarceration, we might wish to preserve rather than dilute or corrode the time-honored distinctions between private and public realms. In Robert Frost's poem "The Hired Hand," we read:

Home is the place that when you have to go there, they

have to take you in.

The proliferation of EM programs may require that we update the poet as follows:

In the late twentieth century, home is the place that when

you want to leave there, they have to keep you in.

8. The fallacy of the 100% accurate or fail-safe system. The glamor surrounding sophisticated electronic technology may lead the uncritical to assume that its results are invariably reliable. In their enthusiasm vendors and program entrepreneurs may fail to acknowledge the technology's weaknesses. As an assessment of EM in Florida put it "the technology has proven both reliable and unreliable" (Papy and Nimer) 191. It may break or fail to work under certain conditions. The technology is also applied and interpreted by humans, with the possibility for errors and corruption.

There are many examples of technical failures: transmissions can be blocked or distorted by environmental conditions such as lightning, proximity to an FM radio station, the metal in mylar wallpaper and trailer walls, some house construction materials, and water in a waterbed or bathtub (with some early versions participants even got electrical shocks while bathing). Poor telephone lines, wiring and equipment may transmit signals that cannot be accurately read. Power, telephone and computer failures may make it appear that a violation has occurred when it hasn't, or the reverse. The quality of telephone service required for confidence in the voice verification system is not available in many places. Those monitoring the system to report violations can be compromised and with private contractors there may be less accountability than in the public sector. Of course in the adversarial context many participants will seek ways to neutralize the system and to exploit its ambiguities (at least four in ten do so according to research by Bauman and Mendelsohn 1990).

9. The fallacy of the sure shot. This fallacy assumes that technically based social interventions will reach their intended target with laser-like precision-the public policy equivalent of a surgical strike. There will be no impact on adjacent or unintended targets. Key participants are seen to be cooperative and of good will and to agree on the goal-rather than passively resisting or adhering to established customs and business-as- usual.

This fallacy encompasses "net widening" in the sense that programs may reach their intended target group and beyond. But it also includes the many criminal justice programs in which displacement occurs instead. Research on intermediate sanctions has frequently found that the intended target group is bypassed.

Highly independent judges may apply intermediate sanctions to an offender pool not envisioned by program planners. Judges may reduce their vulnerability by sentencing less risky clients to EM, even when the program is intended as an alternative to incarceration for more serious offenders. Morris and Tonry (1990) in a study of intermediate sanctions report, "when an intermediate choice is offered, it will tend to be filled more by those previously treated more leniently than by those previously treated more severely. "

It is possible that the announced target is not the intended target. Intensive supervision programs such as EM are anxious to present themselves as directed at high-risk, prison bound offenders, since the expected savings of

prison bed space and related expenses would otherwise not ensue. Hence, the publicized target group is variously described as "serious," "dangerous," and "recidivist."

However, the fine-print of selection criteria for program participants often incorporates exceptions and exclusions which minimize the possibility that truly serious offenders will participate. This lessens the stakes for administrators who naturally wish to decrease their exposure. Clear and Hardyman (1990) offer examples of the recruitment of comparatively low risk offenders for what was promoted as an intensive program aimed at high-risk offenders.

Implementing the program with the original target group may come to be seen as practically or politically too difficult. Palumo et. al. (1990) report that in Arizona, where the legislature set definite criteria for participation in the EM program, the board of Pardons and Parole (BPP) was reluctant to utilize them, waiting five months to place the first inmate in the program. The BPP eventually came to substitute their own criteria-applying EM only to low-risk offenders who would ordinarily have received regular supervision, thereby undermining the intended cost-savings. Clear and Hardyman (1990) report on sites that had to repeatedly alter their eligibility requirements when insufficient referrals threatened the visibility of the programs.

Rather than the ready-aim-fire model of the traditional bureaucracy some of the initial experience with EM suggests that Peter Drucker's ready-fire-aim model may be more appropriate. One fires first and whatever is hit becomes the target.

10. The fallacy of assuming that if a critic questions the means, he or she must be opposed to the ends. This fallacy involves an attempt by technology's cheerleaders to meet any criticism of their means with the claim that the critics are really soft on, or opposed to, the end-in this case, alternatives to incarceration or enhanced forms of probation. This insinuation of bad faith is often a cheap shot. Nevertheless, critics have an obligation to acknowledge the decent intentions and real problems often associated with attempts at innovation.

And we do. To understand that policy experiments are often riddled with hidden, contradictory, ironic, and sometimes perverse consequences is not to suggest that they are inevitably doomed or necessarily directed toward the wrong goals. Awareness of technofallacies can sensitize policy makers to potential pitfalls, but it need not paralyze them. That which we distort through our eagerness to innovate and our infatuation with technical progress, we can correct in part through a growing policy "wisdom," sound program design, and sensitive and intelligent management.

We approach this topic not as Luddites who want to ban new technology, but in a spirit of responsible conservatism, which asks us to pause in the face of any proposed change and to consider its fit within the agency, the appropriateness of its possible latent agenda, alternative development scenarios, the costs of doing nothing, and its likely short- and long-range unintended consequences.

In Kafka's short story *The Penal Colony,* a correctional officer and his superior develop a complicated new machine capable of inflicting horrible mortal punishment on inmates. In the end, the officer who argued so proudly for the new technology is horrifically consumed by it. We don't suggest that anything like this will necessarily happen in corrections, but it is clear that innovations which are not thought out carefully and offered honestly and modestly run the risk of doing great damage. So far we have seen little theoretical or empirical support to justify the rush to EM.

Note

1. This section draws from G. Marx, 1988, Undercover: Police Surveillance in America (Berkeley: University of California Press); chps. 1 and 10.

References

Andrews, D. A. and J. J. Kiessling (1980) "Program Structure and Effective Correctional Practice: A Summary of the CaVIC Research.,' In R. R. Ross and P.

Gendreau (eds.), *Effective Correctional Treatment.* Toronto: Butterworth, pp. 441-63.

Andrews, D. A., J. J. Kiessling, D. Robinson, and S. Mickus (1986) "The Risk Principle of Case Classification: An Outcome Evaluation with Adult Probationers." *Canadian Journal of Criminology.* 28:377-96.

Andrews, D.A., Ivan Zinger, Robert D. Hoge, James Bonta Paul Gendreau, and Francis T. Cullen (1990) "A Clinically Relevant and Psychologically Informed Meta-analysis." *Criminology* 28:369-97.

American Correctional Association (ACA) (1989) *Emerging Technologies and Community Corrections.* Laurel, MD.

Baumer, Terry L. and Robert I. Mendelsohn (1990) *The Electronic Monitoring of Non-Violent Convicting Felons: An Experiment in Home Detention.* Washington, DC: National Institute *of* Justice.

Bryne, James M. (1990) "The Future *of* Probation Supervision and New Intermediate Sanctions." *Crime and Delinquency* 36:641.

Clear, Todd R., Suzanne Flynn, and Carol Shapiro (1987) "Intensive Supervision in Probation: A Comparison *of* Three Projects." In B. McCarthy (ed), *Intermediate Punishments: Intensive Supervision, Home Confinement, and Electronic Surveillance.* Monsey, NY: Willow Tree Press, pp. 31-50.

Clear, Todd R and Kenneth W. Gallagher (1985). "Probation and Parole Supervision: A Review ofCurrent Classification Practices." *Crime and Delinquency* 31:42344.

Clear, Todd R. and Patricia Hardyman (1990) "The New Intensive Supervision Movement." *Crime and Delinquency* 36:42-60.

Cohen, Stanley (1985) *Visions of Social Control.* Cambridge Engl: Polity.

Finckenauer, James O. (1982) *Sacred Straight and the Panacea Phenomenon.* Englewood *Cliffs,* NJ: Prentice-Hall.

Irwin, Billie (1990) "Old and New Tools for the Modern Probation Officer." *Crime and Delinquency* 36:61-74.

Lempert, Richard D. and Christy A. Visher, eds. (1987) "Randomized Field Experiments in Criminal Justice Agencies: A Summary of Workshop Proceedings." Washington, DC: National Research Council, Commission on Research on Law Enforcement and the Administration of Justice.

Marx, Gary T. (1981) "Ironies of Social Control: Authorities as Contributors to Deviance through Escalation, Nonenforcement and Covert Facilitation." *Social Problems* 28:222-46.

(1988) *Undercover: Police Surveillance in America.* Berkeley: University of California Press.

(1989) "Privacy and the Home: The King Doesn't Have to Enter Your Cottage to Invade Your Privacy." *Impact Assessment Bulletin* 7(1):31-59.

(1990) "Privacy and Technology." *World & 1* 3:523-541 (Sept.).

(forthcoming) *Windows into the Soul: Surveillance and Society in an Age of High Technology.* Book based on the Jensen Lecture delivered to the American Sociological Association meetings, Cincinnati, 1991.

Merton, R. (1957) *Social Theory and Social Structure.* Glencoe, IL: Free Press.

Palumbo, Dennis J., Mary Clifford, and Zoann Snyder-Joy (1990) From Net Widening to Intermediate Sanctions: The Transformation of Alternatives to Incarceration from Malevolence to Benevolence." Prepared for delivery at the meetings of the American Criminological Association, Baltimore.

Papy, Joseph and Richard Nimer (1991) "Electronic Monitoring in Florida." *Federal Probation* 31-33.

Petersilia, Joan M. (1987) *Expanding Options for Criminal Sentencing.* Santa Monica: RAND.

(1990) "Officials Aim to Fill the Gap between Probation and Parole." *Criminal Justice Newsletter,* Sept. 17, pp. 2-3.

Petersilia, Joan M. and Susan Turner (1990) "Comparing Intensive and Regular Supervision for High-Risk Probationer: Early Results from an Experiment in California." *Crime and Delinquency* 36:87-111.

Reinecke, Ian (1982) *Electronic Illusions.* New York: Penguin.

Schmidt, Annesley K. (1989) "Electronic Monitoring of Offenders Increases." NIJ *Reports* no. 212 (Jan/Feb).

Seiber, S. (1982) *Fatal Remedies.* New York: Plenum.

Thompson, J. D. (1967) *Organizations in Action.* New York: McGraw-Hill.

Tonry, Michael and Norval Morris (1990) *Between Prison and Probation.* New York: Oxford University Press.

Tonry, Michael and Richard Will (1990) *Intermediate Sanctions.* Washington, DC Report to National Institute of Justice.

U.S. Department of Justice (1990) *Survey of Intermediate Sanctions.* Washington, DC: Dept. of Justice.