CRIME REDUCTION THROUGH a REGULATORY APPROACH

Joining the Regulatory Fold

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The police profession has much to gain by recognizing its kinship with a broad range of regulatory professions. Law-enforcement agencies, security and intelligence organizations, and social regulatory agencies all exist primarily to protect society from a variety of harms. Such harms include crime, pollution, occupational hazards, transportation hazards, corruption, discrimination, various forms of exploitation, food contamination, terrorism, and risks from unsafe commercial products. The core task for such organizations is to identify harms, risks, dangers, or threats of one kind or another, and then either eliminate them, reduce their frequency, mitigate their effects, prevent them, or suppress them, and, by so doing, provide citizens higher levels of safety and security.

Agencies with risk-control tasks at the core of their mission are a special breed, and can learn a great deal from one another. They are fundamentally different from the other half of government, which provides citizens with *services* such as education, health care, welfare, or public transportation systems.

Enforcement and regulatory agencies accomplish their task principally by constraining the behavior of citizens or industry. They deliver protection from harm primarily through the delivery of *obligations*, and they use the coercive power of the state to back up that delivery! They may, on occasions, restrict business practices, seize property, suspend licenses, and even deprive individuals of their liberty or life. Not surprisingly, given their use of such powers, these agencies are scrutinized and criticized more for their uses and abuses of power than for their uses and abuses of public funds. The price paid by society—in terms of governmental intrusion, loss of liberty, and imposed restrictions—has to be worth it in terms of risks reduced, harms prevented, or dangers mitigated.

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The vogue prescriptions used to improve governments' performance over the last 30 years, largely imported from the private sector, have provided little instruction in relation to these distinctive risk-control tasks. The management guidance available has focused on customer service, business process improvement, and quality management,[1] much less on the challenges of operational risk-control, behavior modification, compliance management, or the structuring of enforcement discretion around specific harm-reduction objectives. Risk-control agencies have been left to fend for themselves, to invent their own more particular brand of reforms, and to seek more specialized and relevant sources of inspiration.

For more than a decade, Harvard has been convening executive programs designed for exactly this group of regulatory professionals, with the express purpose of focusing on those managerial and organizational dilemmas that they all share, and which separate regulatory and enforcement agencies from the remainder of (mostly service-providing) government.[2] A few police executives have attended these courses and quickly discovered a natural kinship with their regulatory peers. But the number of police executives attending remains relatively small, as most police professionals do not view themselves as "regulators" nor do they recognize regulatory strategy discussions as relevant for the police profession. Some years ago, we even altered the name of the course, to "Strategic Management of Regulatory *and Enforcement* Agencies," in a deliberate attempt to emphasize the relevance for police and other law-enforcement agencies, but to relatively little avail.

Historically, the police profession has paid little attention to literature on regulatory strategy, drawing insights instead almost exclusively from dedicated studies of policing and from the academic disciplines of criminal justice and criminology. The police profession seems to have operated on the maxim "if it is not *about* us, it is not *for* us." What this means, in effect, is that most good ideas for improving regulatory strategy have to be invented twice: once for social regulators and then again (and usually independently) for the police profession.

Eck and Eck (2012, this issue) illustrate the potential value for police in glancing sideways to see what their regulatory peers are up to, and what tools and methods they may have developed. Eck and Eck explore a variety of control *instruments*, more normally associated with environmental protection, which might become relevant to crime control if we view crime as an externality emanating from specific places (badly managed bars, clubs, or poorly protected parking lots), and where the consequences (costs) of the resulting

1. Alford and Speed (2006) provided a careful examination of the ways in which a "client focus" needs to be adapted to be constructively applied within a regulatory setting. For a review of the application of customer-service ideals and business process improvement methods in reform of U.S. regulatory agencies, see Chapters 4 and 5 in Sparrow (2000).

2. A 1-week executive program titled "Strategic Management of Regulatory and Enforcement Agencies" was offered first at the Harvard Kennedy School in 1998 and is now offered twice a year. It also is offered twice a year in the Southern Hemisphere through the Australia and New Zealand School of Government.

crime-clusters are borne by other patrons, local residents, or persons in the vicinity. The question then becomes how best to induce *place-managers* to take more responsibility for controlling the crime problems associated with their businesses or premises. With that goal in mind, Eck and Eck consider the use of penalties (for failing to implement mandated controls), subsidies (to encourage deployment of relevant technologies), tax reductions (as rewards for contributions to control), and rating schemes (to inform consumers of the levels of risk). They also question whether issuing place-managers with tradable permits, specifying amounts of crime to be expected or accepted in the vicinity, could conceivably produce the same kind of efficiency gains in crime control as in the control of industrial pollution.

The application of such ideas to crime control is certainly interesting and worthy of deeper consideration. Many of these particular methods would probably not hold up, as Eck and Eck (2012) seem to anticipate, in the face of potential ideological objections. From the victim's perspective (imagine a vehicle owner whose car is robbed overnight in a parking garage), it would be difficult to understand what it meant that this particular crime was "within the permitted amount of crime" or what the policy justification was for permitting any crime at all. With pollution, at least there is some countervailing benefit, as industrial pollution results from socially useful processes of energy production and industrial manufacturing. Hence, society accepts that pollution, although it still needs to be controlled properly, is neither inherently evil nor completely avoidable.

From the place-managers' perspective, treating local crime problems as an externality produced by their businesses might seem objectionable and legally questionable. Eck and Eck (2012) neatly summarize their central assertion thus: "places can emit crime just as a coal-fired power plant can emit sulfur dioxide." From a legal perspective, this analogy may turn out to be awkward. Place-managers would no doubt point out that sulfur dioxide has no brain, exercises no choice, and therefore cannot be held responsible for the damage that it causes. Even with evidence of place-centered crime-clusters, obvious difficulty remains in attaching responsibility to the owner or manager of premises for crimes committed elsewhere, and usually later, by their patrons—who, of course, exercise considerable choice in the matter and are normally counted fully responsible for their own behavior.

My point is not at all to dismiss any of these options, but to point out that picking and choosing from a range of regulatory instruments needs care and attention, and a lot more discussion. Eck and Eck (2012) have usefully opened that discussion in relation to place-based crime problems. Some ideological objections could perhaps be circumnavigated if innovative crime-control policies avoid using measures that seem to reward place-managers for cleaning up crime problems that they helped create. Obliging businesses to pay experience-rated premiums into a crime compensation insurance scheme—in the same way that businesses' are obliged to buy workers' compensation insurance from the state, with premiums based on their own recent occupational injury rates—might provide suitable financial incentives without the public appearance of rewarding past irresponsibility.

Admitting evidence of local crime patterns at license renewal hearings also seems plausible and defensible. In any case, finding ways to reinternalize the externalities associated with criminogenic places is a worthwhile pursuit and might produce some novel approaches. I will look forward, as such work matures, to someday parking my car in a hotel parking lot next to a sign that proclaims, "Hotel Management takes full responsibility for any damage to, or theft from, vehicles parked in this lot."

What Explains the Divide?

Given the natural kinship that police should by virtue of their mission feel with other regulators, and the many benefits that could result from exchanging ideas and tools, it is worth wondering why police have not, to date, joined or enjoyed the broader brotherhood of harm-reduction professionals.

Several factors contribute to this. First, police do not view themselves as "regulators" because they are not involved much, if at all, in the promulgation of regulations. Police rely on existing criminal statutes for their legal authority and seldom generate subsidiary ordinances or regulations in the way that most social regulators do.

Culturally, police agencies seem distinct too. They wear uniforms, carry firearms, and traditionally exhibit many aspects of a quasi-military culture. They feel greater kinship, therefore, with other law-enforcement agencies that share these same features (e.g., Customs, Coast Guard, and Immigration) than they do with their unarmed, nonuniformed, unsworn civilian counterparts in regulatory agencies.

The domain for police work also is different. Police often seek *persons unknown*, and *at-large* for crimes committed. Their jurisdiction is everywhere, covering both public and private spaces. By contrast, much of the work of regulatory inspections focuses on specific business premises or plants. Officials responsible for management of the plant and compliance with regulations are clearly identifiable, up front. Their behavior might be an issue, but generally their identity is not.

Also, the risks police tackle have some distinctive properties. Many involve *opponents* (criminals or perpetrators) who seek deliberately to evade detection and adapt their strategies to circumnavigate control initiatives.[3] Most environmental problems and workplace safety hazards do not have that property. If occupational safety regulators identify a safety hazard accurately and address it, then that hazard does not go searching for some other way to kill people! If environmental professionals solve one pollution problem, they do not generally create another. Most environmental, health, and safety hazards have no brain, and consequently they cannot deliberately seek to thwart official efforts to control them, nor do they try to hide their activities. Criminal enterprises clearly do both.

3. For a discussion of this class of risks and the special challenges they present to those responsible for control, see Chapter 9, "Conscious Opponents," in Sparrow (2008).

Curiously, during the last few years, environmental regulators have been running more often into problems that do indeed involve conscious opponents. Such problems include illegal logging, poaching, or smuggling of endangered or protected species; deliberate and illegal introduction of sport-fish into lake systems where they do not belong, and the increasing involvement of organized crime groups in toxic waste management (and illegal dumping). In all these areas, traditional environmental regulatory approaches seem weak and not quite appropriate. The underlying scale of such problems is unknown, as most illegal activity is deliberately hidden. Displacement occurs when regulators intervene. The regulatory job becomes, suddenly, much more dangerous. And environmental regulators now have to consider the use of a broad range of tactics and methods—such as undercover operations, covert surveillance, and the use of paid informants—that they almost never used in relation to pollution problems originating from industrial plants. Where might environmental professionals go for advice on such matters? They need to go to the police and other law-enforcement professionals whose risk-control responsibilities routinely involve tackling opponents (thieves, hackers, smugglers, or terrorists), and who frequently use such tools and methods. Law-enforcement agents could readily help environmental professionals understand the role that intelligence and counterintelligence plays in such situations, the importance of unpredictability and mystery, and the justifications for official deception in combating criminal enterprise. The potential learning, if police talked more often with their regulatory counterparts, would surely go both ways.

Common Ground

So some significant differences are indeed worth noting. Such differences can be a rich source for discussion across disciplinary lines. But the commonalities are far more numerous and more important, and the strategic and organizational dilemmas these professions confront are strikingly similar.

Law-enforcement agencies and agencies of social regulation exist primarily to control harms of one type or another. [4] They are expected to be effective in providing protections but yet to be minimally intrusive and burdensome at the same time. They all use reactive, preventive, and proactive methods and seek to integrate these into coherent control strategies.

In terms of organizational forms, they each run specialist functional units and operate core high-volume operational processes as well (responding to calls, processing tax-returns, reviewing license applications and renewals, and taking complaints), but they also want

4. *Social* regulation, which centers on issues of health, safety, and welfare, usually is distinguished from *economic* regulation, which focuses on the healthy functioning of markets. Agencies of social regulation are given industry-wide responsibility for the control of a specific category of risks or threats (e.g., environmental, occupational safety, labor practices, and consumer product safety). By contrast, agencies of economic regulation seek to preserve competition, efficient market function, and fair trade practices within one specific industry (e.g., transportation, utilities, communications, or financial services).

to organize themselves to deal with specific risks or problems, even when these problems do not align neatly or at all with existing functions, processes, or any other piece of the established organizational structure. The police profession calls this "problem-oriented policing," whereas many regulatory agencies talk of "risk-based regulation" or (in tax administration) "compliance management."

These agencies all want to understand how to deploy analysis to help identify and disaggregate risks more accurately and how to orient their performance story around harms reduced, risks controlled, or problems solved rather than around traditional output or activity measures. They all contend with inevitable tensions that arise between competing values, where organizational *effectiveness* seems to require the use of careful targeting, selection, and focus, but that seems fundamentally at odds with the traditional regulatory values of consistency, uniformity, equity, and fairness.

They are all expected to embrace the values of openness, predictability, and transparency, but they have to somehow square those values—especially when dealing with conscious opponents intent on thwarting control efforts—with their need to remain on occasion unpredictable, to use disinformation or deception (as in undercover operations), and to retain the element of surprise.

These agencies also wrestle with the foundational dilemmas of regulatory policy, such as the tension between the *legal* model of regulation (where regulators focus on procuring compliance with existing law) and the *expert* model of regulation (where regulators focus on harm reduction and invent alternative methods for influencing behaviors that may be harmful but not illegal). The regulatory world at large is currently leaning more explicitly and deliberately toward the *expert* model. Reasons for this include increased public pressure for better protection in the wake of the attacks on September 11, 2001, the Global Financial crisis, and other perceived "regulatory failures." The burgeoning *risk literature* might have helped too, although it has focused more on the psychology of risk perception (by individuals) than on risk control as a governmental or organizational challenge. For sure, the modern focus on risk and risk control has helped inspire regulators to focus more carefully on the business of identifying and suppressing specific harms, especially emerging and unfamiliar ones, rather than continuing to rely on traditional processes and programs.

Explicitly acknowledging and embracing the *expert* model constitutes a profound shift. It affects virtually every aspect of modern regulatory conduct. Currently, regulatory executives are grappling with the implications for organizational structure, managerial decision making, the use of discretion, the structure of performance reporting, and the evolving nature of their relationships with the communities they regulate.

All these issues affect police organizations just as much as they do other regulatory bodies. Police use somewhat different vocabulary to describe them. What police call *problem oriented*, other regulators call *risk based*. What police call *community policing* looks remarkably similar to what regulators call *coregulation*—signaling closer, collaborative

relationships between government and people, sharing responsibility for establishing and pursuing a joint risk-control agenda.[5]

Potential Benefits

The police profession could benefit in many ways from joining regulatory strategy discussions. First, as Eck and Eck (2012) illustrate, they would discover a much broader range of compliance-management and behavior-modification techniques (regulatory instruments) than police have used traditionally, several of which might be applied usefully to crime control and other public safety issues.[6]

Second, police would observe a more carefully delineated set of regulatory *structures*. Eck and Eck (2012) touch on this subject when they categorize the regulatory instruments they discuss, variously, as either *means based* or *ends based*. This distinction forms part of a larger puzzle, as regulators figure out, with respect to any specific risk, *who* should be responsible for *which parts* of the risk-control task.

We can learn a lot about alternative regulatory structures and the ways in which they relate to the idea of risk management by crudely splitting any risk-control initiative into three parts. For a specific risk to be controlled (whether it relates to crime, pollution, disease, or safety hazards), someone has to *identify* the risk, someone has to *analyze the risk and design a suitable intervention* (analysis and design), and then someone has to *act in a particular way or stop acting in particular ways* to apply the intervention. Regulators and the regulated community can split these three tasks between them in various permutations and combinations, and—depending on which parts of the job government keeps and which parts government delegates to the community—thereby produce distinct models of regulatory interaction.

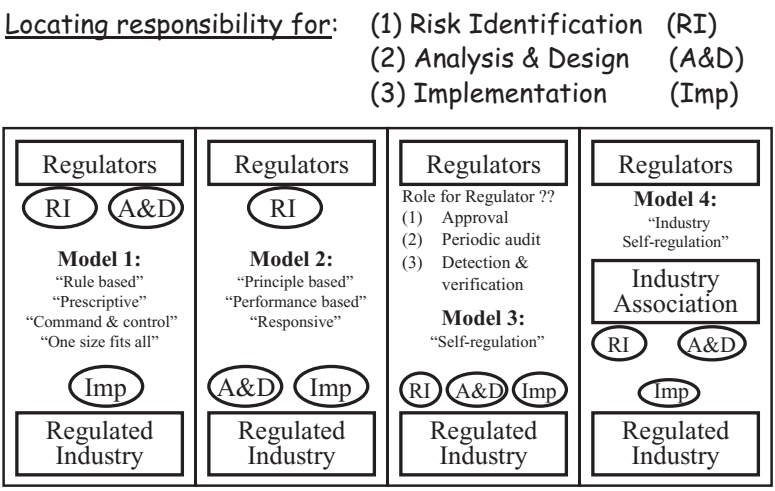
Under the traditional regulatory approach (labeled model 1 in Figure 1), government retains responsibility for spotting risks, analyzing them (maybe with some consultation along the way), and developing an intervention design. Government then issues prescriptive rules or regulations informing the community what must be done to control the risk (e.g., "balconies must be equipped with railings at least 3 ft high and with bars no further apart than 4 in"). The regulator focuses thereafter on procuring compliance, and compliance with the rules is assumed necessary and sufficient to control the risk. Regulators call this "prescriptive" or "rule-based" regulation. Those who disapprove of this style of regulation have also attached to it a variety of derogatory labels, including "command-and-control" regulation and "one-size-fits-all" regulation.

5. Martinez, Fearne, Caswell, and Henson (2007) explored the potential application of "coregulation" in food safety in both the United Kingdom and the United States. Coregulation is described as involving "public and private sectors working hand-in-hand to deliver safer food at lower (regulatory) cost."

6. For an extensive catalogue of regulatory methods, see Frieburg (2010).

FIGURE 1

Regulatory Structure: 4 Models



When regulators recognize diversity in the regulated industry, they shift to model 2, delegating the *analysis and design* parts of the risk-control task. In other words, government still identifies the important risks but allows the community considerable flexibility in how they will control them. Eck and Eck (2012) refer to "ends-based" instruments. In the regulatory literature, this approach is usually called "performance-based" or "principle-based" regulation.

Delegation does not necessarily stop there. Large companies in highly technical arenas press for more control. They argue that it is they, not government, who knows their own business best and employs the best technical experts, and therefore, they are in a better position than government to identify the relevant risks. High-tech industries thus press for control of all three parts of the risk-control process: risk identification, analysis and design, and intervention. Model 3, where the regulated industry or community takes responsibility for all three, is called "self-regulation." Industry is basically relied on to run its own risk-management operation, and the role of government regulators changes significantly: Now they get to approve industry's risk-management plans up front, and subsequently they audit the operations of the risk-management system on a periodic basis to make sure the company is effective in identifying and controlling risks. They also should maintain their own independent audit and discovery systems so they can verify the truthfulness of the company's account regarding problems that develop and their success (or failure) in controlling them.

Model 4, "industry self-regulation," is a variant on model 3. Some industries, particularly those consisting of a large number of small companies, do not want the bother

of designing and running elaborate risk-control systems of their own. But they do not want government imposing burdensome and prescriptive rules either. So they club together and form an industry association, which they then rely on to identify risks common across the industry, analyze and design interventions palatable to the association's members, and issue requisite guidance and instruction. [One could conceivably imagine an association of bar owners, or of parking-lot management companies, playing a similar role with respect to the types of place-based risks discussed by Eck and Eck (2012).]

In the regulatory world, models 3 and 4 have become fashionable lately. The "better regulation" movement in Europe and throughout the Organization for Economic Co-Operation and Development countries incorporates an underlying ideological (and often political) preference for "light-touch, self-regulatory approaches." The advent of "safety management systems" in civil aviation throughout the world also delegates much more responsibility for risk identification and control down to the level of corporations (airlines, aircraft maintenance operations, and aircraft manufacturers), with aviation safety regulators focused increasingly on auditing the safety management systems of others, rather than on doing so much of the risk-management work themselves.

To prefer one or another of these structures on ideological or political grounds turns out to be a huge mistake. Each structure works well for specific types of risk and likely will fail if applied to the wrong sets of risks. The state of the art, in terms of regulatory design, is to begin to appreciate the need to operate multiple regulatory structures simultaneously, even with respect to the same industry but for different classes of risk.

Self-regulation (model 3) works well for risks (a) that are observable from the level of the corporation, (b) that the corporation would be happy to disclose if found, (c) that are within their capacity to control, and (d) where controlling the risk is closely aligned with their business interests. But that is a relatively small subset of risks, and arguably it is the subset likely to be best controlled already. Self-regulation is an unreliable approach for dealing with risks that would not be visible from a decentralized perspective (i.e., which require higher level analysis and monitoring), which they would not disclose or address responsibly (such as corruption on the board), or which are beyond their capacity or not in their interests to control.

The array of structural options gets more complex when two other factors are introduced. The first involves recognizing that any of these three crude phases of the risk-control process (identification, analysis and design, and implementation) can be shared rather than being placed unambiguously with government or the community. The second involves recognizing the multitiered jurisdictions that pertain to many regulatory tasks. Designing regulatory structures in Europe has been complicated substantially by the advent of the European Union as a regulatory superstructure. In the United States, most regulatory and law-enforcement tasks involve federal and state agencies, as well as city and local departments. These additional dimensions enlarge substantially the range of options as one considers *who* should be responsible for *what.*

In fact, as the range of structural options increases, this simple diagnostic device becomes more and more valuable as it provides considerable clarity. For any specific category of crime problems, it makes sense to ask, "for *this type* of problem, *who* should be responsible for *what*?" Who is best placed to identify emerging patterns and trends? Who has a vantage point at the right level—not too high and not too localized—and the relevant data or monitoring capabilities that will enable them to spot emerging trouble, of this type, in a timely fashion? Who is best placed to analyze and understand an emerging risk, and to propose suitably tailored interventions? Which parties within the community can be trusted to play their part because it is in their interests to do so, and which parties must simply be told what must be done and forced to comply (model 1) because their private interests relating to this type of risk simply do not align with public purposes? Also, which parts of the community should be consulted in the analysis and design phase because of the special insights they might have into the genesis or dynamics of specific crime problems?

Note that these questions have no right answer *in general*, as there is no single regulatory structure that is good for all risks. These questions have to be asked for each distinct set of risks and should lead to different arrangements in respect of different problems. That is part of what it means to master *risk-based* regulation.

The professional era of policing, in terms of the nature of the relationship between police and the community, most closely resembles model 1, *prescriptive regulation*. The community policing movement shifted the profession closer to model 2 and explicitly incorporates the notion of *co-production*, with responsibility shared between the police and the community for risk identification, prioritization, solution design, and delivery.[7]

Empowering communities to become crime-resistant and resilient in their own right may yet move crime control closer to model 3, *self-regulation*. We also might imagine that models 3 and 4 could help public policing develop constructive and appropriate relationships with a proliferation of private policing and security organizations. Where competent private organizations exist—such as security operations in an industrial park or housing complex, or university campus police departments—public police might end up assuming the role of overseers or auditors of someone else's crime-management and safety plan. Police might take a similar approach to major trucking firms or coach companies in relation to traffic compliance and highway safety. As public policing seeks to make better sense of the growth of private policing, it might be useful to explore a more diverse set of structural relationships with private parties that could end up supporting and furthering the public risk-control task.

Recent experience among regulators suggests it is best not to prefer any one model. Rather, the considerable range of possibilities should be appreciated. Tailor the choices to specific classes of risk and recognize that any one group of actors can be your natural

7. For a broader regulatory view of the notion of coproduction, see Chapter 3, "Legal Compliance, Regulation, and Co-Production," in Alford (2009).

and trustworthy allies in relation to one problem and yet can have diametrically opposed interests in relation to another.

Unfinished Business: The Maturing of Problem-Oriented Policing

A broader look across professional lines also might shed light on the nature of progress made to date in the development of problem-oriented policing. Regulatory agencies confront problems of many different shapes and sizes, and each regulatory profession tends to have its own tradition in terms of which shapes, or dimensions, it recognizes readily. Police have focused most naturally on *place-based* concentrations of crime—a tradition that stretches back before the advent of geographic information systems or computerized crime-mapping software, when "crime analysis" revolved around pin-maps on precinct commanders' office walls.

Other regulatory professions have different traditions. Consumer product safety focuses most naturally on the risks associated with specific products (e.g., baby walkers, and the associated risk of toddlers in baby walkers tipping over and falling down stairways) or with specific categories of products that pose more generic dangers (e.g., plastic products made in China with unacceptably high lead-content levels).

Occupational safety regulators traditionally have focused on industry groups and categories of hazard that are concentrated within each industry group: for example, "falls from heights" and "trench cave ins" in the construction industry, "tractor rollovers" and "deaths in grain-handling" (asphyxiation of farm workers in grain silos) in farming, asbestosis in the roofing industry, lacerations to hands and forearms on poultry production lines, and so on.

Tax agencies tend to organize their compliance-management efforts around categories of taxpayers, which they call "market segments" (i.e., personal, small business, big business, and international business) and then around the methods of tax avoidance or evasion that exist within particular segments.

But all regulators discover, sooner or later, that risks come in many shapes, and whereas some align neatly with the existing organizational structures and well-practiced operational methods, most do not. The challenge, then, is to produce the flexibility and fluidity that enables the agency to organize itself differently for different types of risk and to do so without a series of wrenching reorganizations.

Nowhere is this challenge more acute than in environmental protection, as environmental risks come in so many different forms. Some pollution problems concern specific discharges from specific industrial facilities (and these fit nicely into traditional permitting programs, which are organized by media: air, water, and hazardous waste). But other environmental risks involve endangered species, or the arrival of exotic plants or animals that distort the equilibrium of native ecosystems. Some environmental problems are industry specific (e.g., heavy metals as a by-product of the printing industry, gypsum as a by-product of phosphorous extraction, excessive use of certain pesticides in citrus-farming, or the use of

mercury in dentistry). Some problems relate to topographical areas (air-basins or watersheds) where pollutants accumulate. Non-point-source pollution (like agricultural runoff) has to be monitored and managed in terms of watershed areas and permissible loadings in rivers and streams. Other problems relate to the loss of or danger to natural resources (wetlands, habitat, fish-stocks, or coral reefs). Other environmental risks—such as radon gas, lead paint, mold, and asbestos—appear in the home and have nothing to do with industrial facilities and not much to do with geography.

In learning about the multidimensional character of harms and exploring the organizational challenges of a problem-solving approach, the police profession enjoyed a substantial head start, thanks to Herman Goldstein. From the 1970s onward, Goldstein addressed explicitly the limitations of geographic and temporal analysis, and the profession's reliance on standardized tactics.[8] He urged police to recognize the many other ways in which crime problems might be concentrated, pointing out that some involve repeat offenders whose crimes were dispersed geographically. Some crime patterns revolve around criminal enterprise or clashes between competing syndicates or gangs. Some involve specific classes of victims, even repeat victims, or patterns of antisocial behavior. Goldstein decried the narrowness of the "hot-spot" focus—even as that form of analysis migrated from pin-maps to the computer (Goldstein, 1990). Worse, he said, police have not only relied on one principal form of analysis, they have also relied heavily on one standard tactical response—*directed patrol*—to deal with any hot spots revealed by that analysis.

More than three decades since Goldstein began teaching the profession about the myriad varieties of crime patterns and the importance of generating creative and tailored responses, it is worth asking how much progress the profession has made in moving beyond "cops on dots" strategies. Many departments still rely on some type of Compstat process as their embodiment of the problem-solving method, and most Compstat systems retain (from the original New York City version) a heavy emphasis on reported crime statistics split first by precinct, and then by hot spots within each precinct.[9] Even the latest idea to surface, *predictive policing*, seems to rest rather squarely on the idea that one can extrapolate from historical patterns to determine, in advance, *where* and *when* a crime is likely to occur (so police can *be there* with a view to preventing the crime or intervening during its commission.)

Even the scholarly champions of evidence-based policing, in their efforts to determine whether problem-oriented policing really works, seems to have ended up focused heavily on evaluating *place*-based intervention strategies. That might be because *that is what problem-oriented policing has become*, and therefore, these are the only types of problem-oriented

8. For one of his best known earlier works, see Goldstein (1979). His most comprehensive treatise on problem-oriented policing is presented in Goldstein (1990).

9. Sparrow (2009) provided a discussion of the relationship between Compstat processes and the broader notion of problem-oriented policing.

strategies widespread enough to be susceptible to systematic evaluation. For all the scholars and practitioners who have taken Goldstein's message to heart and tried to make it work in practice, this conclusion would be terribly disappointing and frustrating.

But it could be because place-based interventions are easier than other types of problem-based intervention to evaluate *with social science methods*. Perhaps place-based experiments are easier to design and conduct than experiments focusing on family-centered interventions, city-wide gang-intervention strategies, or strategies designed to protect repeat victims. Weisburd and colleagues, in their 2010 Campbell Systematic Review, surveyed 5,500 problem-oriented policing related articles and found only four randomized studies, all four of which involved place-based experiments (Weisburd, Telep, Hinkle, and Eck, 2010). Their study also located six quasi-experimental designs, and four of these also turned out to be place-based. The two designs that were not place-based involved treatments applied to probationers and parolees, respectively, who can presumably be obliged to conform to experimental protocols in ways that ordinary members of the public cannot.

Whatever the reason, it seems surprising and disappointing that the form of analysis and intervention that Goldstein decried, more than three decades ago, as narrow, particular, and limiting—that is, *place-based* analysis, followed by some version of *cops-on-dots* deployment—apparently remains to this day so utterly central both in operational policing and in scholarly inquiry.

With respect to the multidimensional nature of harms, I am not suggesting that other regulatory agencies have it any easier. They just have it *different*; and differences are both interesting and instructive. Regulatory agencies vary enormously in terms of the shapes and sizes of problems they naturally recognize and are accustomed to tackling.[10] They also respond organizationally in different ways when problems come to light that do not fit their analytical and operational traditions. Some of them, particularly agencies of environmental protection, have wrestled for much longer and more explicitly with the challenges posed by pollution issues defined in different dimensions—no doubt because of the extraordinary range of problems they confront. Environmental agencies have at various times reorganized around the dimensions of the most pressing problems of the day. That just makes other problems *not fit*. At other times, they have constructed dedicated units for each different type of problem and have tried to run them all simultaneously, but that becomes expensive as the *types* of problem keep proliferating over time. More recently, many regulatory agencies are producing their own version of a problem-oriented approach, relying on fluid resource allocation and temporary risk-based project-teams, which can be formed and unformed as problems appear and get resolved, and without any change in the underlying organizational structure.

10. For a detailed discussion of the varying dimensionality of harms/problems and the implications for control strategies, see Chapter 4, "Defining Problems: Picking the Dimensions," in Sparrow (2008).

A Multitude of Opportunities

A richer conversation between law-enforcement and regulatory agencies could bring other benefits too. Some important harms straddle jurisdictional lines and require interagency cooperation. An obvious example is the issue of violence in the workplace, a substantial proportion of which stems from domestic disputes spilling over into the workplace. This issue clearly is a policing matter, but—insofar as it affects the safety of workers within their workplaces—it is an occupational safety concern as well. Collaboration between environmental agencies and police around the problem of toxic waste dumping by organized crime would certainly run more smoothly if these agencies became more aware of their similarities and a little less focused on their differing traditions.

The police profession also might gain from an examination of the different ways in which other regulators use science. The fields of environmental protection, food and drug safety, occupational safety and health, nuclear safety, and transportation safety are all deeply embedded in the natural sciences. Agencies employ significant numbers of highly educated scientists, with backgrounds in physical, chemical, biological, and engineering sciences. Given this strength in the natural sciences, these professions instinctively perform a detailed analysis of the mechanisms through which harms occur. A precise diagnosis of the problems, up front, leads naturally to highly targeted and specific interventions carefully designed to alter or interrupt precursor event sequences.

These natural-science-rich agencies then rely much less on social-scientific methods applied after the fact. They end up, therefore, with a different balance between natural science and social science support. They invest much more heavily in the diagnosis of problems up front, using the inquiry methods of the natural sciences, and they need much less, after the fact, in terms of program evaluation. They derive their confidence that specific interventions worked not so much from statistical analysis and controlled experiments, but instead from being able to study closely the mechanism of the harm and observe directly when they have sabotaged it successfully.

The police profession, as it seeks to advance its problem-solving expertise, might benefit from adjusting the ways in which they use scientific inquiry. Hopefully, police will become more careful and deliberate up front in diagnosing the precise nature of specific crime problems and fathoming the mechanisms through which they unfold, and a little less quick to assume that the answer lies in accepting or rejecting generic programs invented elsewhere.[11] Such a shift would lead the profession to ratchet up its investments in more versatile and sophisticated forms of crime analysis, in support of risk-based or problem-oriented policing.

The police profession has toiled unnecessarily because of its isolation. Joining a richer cross-professional discussion would accelerate its development. The profession does not need to invent everything for itself. Many other regulatory professions face equivalent

11. For a discussion of the differences between natural science and social science inquiry methods, as well as the appropriate mixture of these that is required to support modern policing, see Sparrow (2011).

pressures, share similar aspirations, wrestle with the same tensions and conflicts, and are exploring reform ideas perfectly applicable to policing. Hopefully this essay has touched on enough potentially fruitful areas to make the prospect of such broader discourse seem attractive and worthwhile.

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