

## Introduction

Much of the unfinished business for the human race seems to consist of harms, threats, or risks of one kind or another, insufficiently controlled. The United Nations Millennium Declaration, adopted by the UN General Assembly in September 2000,<sup>1</sup> lays out among its key objectives a daunting array of such harms to be controlled. The declaration lists, among others, hunger, war, genocide, weapons of mass destruction, international terrorism, the “world drug problem,” transnational crime, smuggling of human beings, money laundering, illicit traffic in small arms and light weapons, anti-personnel mines, extreme poverty, child mortality, HIV/Aids, malaria, other emerging infectious diseases, natural and man-made disasters, violence and discrimination against women, involvement of children in armed conflict, the sale of children, child prostitution, child pornography, and loss of the world’s environmental resources. Many other major policy challenges can be naturally labeled and described in similar terms. Societies seek in turn to reduce violence and crime, pollution, fraud, occupational hazards, transportation hazards, corruption, many forms of discrimination, product-safety risks, and so on.

This book examines the distinctive operational challenges that the task of *controlling harms* entails, pressing the claim that anyone involved at any level in the control or mitigation of harms (of any type) might benefit from understanding the distinctive character of this task, and mastering some distinctive patterns of thought and action that go with it.

The idea that this subject is worth addressing at such a high level of generality may seem ridiculous to some, and for a variety of reasons. Academics and practitioners who have spent significant portions of their careers delving deeply into one specific category of harms or another might argue that effectiveness in control depends only on domain-specific knowledge and analyses; that their specific domain is

quite unlike anything else; and that it is therefore hard to imagine much value arising from a broader view.

Others might argue that controlling harms is ultimately no different from constructing goods: that one is merely the dual of the other. The task of controlling crime could equally be framed as *promoting public safety*. Instead of *pollution control* we should focus on *environmental stewardship*. Rather than declaring war on poverty, we should promote economic development and prosperity. Rather than focusing on gender discrimination, we should promote and advance *equality*. Rather than dwelling on the potentially embarrassing issue of *corruption control*, it would be better (certainly more comfortable) to focus on *promoting integrity*.

All of these harm-reduction challenges, apparently, can be described either way up: either the reduction of a *bad*, or the promotion of some countervailing *good*. Between the good and the bad is a surface to be moved, and it makes no difference whether we push from one side, or pull from the other. Thus the distinction, should we choose to draw one, might seem, for some, merely mathematical (seeking expansion of positives versus contraction of negatives), and they might say that in setting goals and measuring progress from one side of the boundary or the other we would only be playing with the mathematical signs (pursuing a “plus” times a “plus,” or a “minus” times a “minus”).

For others the distinction may appear a matter of social construction, stemming from differing ideological lenses and disciplinary traditions. Perhaps we’d imagine that law enforcement officials, if asked to wash a dirty frying pan, might launch into the task by aggressively attacking the burnt and blackest spots, followed progressively by the lesser evils, until “all the dirt had been properly dealt with.” Social workers and educators – more accustomed to *bringing out the good* – might be more comfortable identifying relatively clean areas of the pan, and working away at the edges of those areas, progressively expanding them, until *cleanness* eventually covers the whole.

If the choice about which way up to describe such challenges is merely semantic, and has no operational consequence, then the subject of *controlling harms* is no different from the subject of *doing good*, or *constructing goods*; and doing good is surely so broad as to be no subject at all.

So one potential problem for this particular enterprise is the possibility that there might be no subject here – either because there are no

useful higher level generalities that span the myriad domains of harm, or because the focus on harms rather than goods is of no consequence. I draw some hope, though, that neither is true – and I draw it principally from more than fifteen years of experience working with executives across the entire spectrum of regulatory or enforcement agencies. These public officials work in agencies, most of which have as their core mission the control or containment of some particular class of harms. Nevertheless these regulatory executives scarcely, if ever, have had the chance to converse across the lines that separate their respective regulatory fields, that is, until we put them together in a classroom or workshop setting and tell them that the agenda or curriculum is oriented precisely toward those managerial and organizational dilemmas which they all have in common. And, however skeptical they might be at the outset, they soon discover there are plenty of such issues.

In one recent executive program in Brisbane, Australia,<sup>2</sup> we brought together sixty-one regulatory executives spanning twenty-six different professions. The majority of the participants came from classic agencies of social regulation, with a predominant or substantial orientation toward harm reduction (even though virtually all such agencies deliver some services as well). These agencies included police, taxation, environment and natural resource management, fisheries protection, customs, financial regulation, consumer protection and fair trading, occupational safety, transportation safety, racing and gambling licensing, marine safety, mine safety, child safety, justice, and emergency services. The remaining participants came from agencies which were primarily providers of government services, but these participants represented sub-units within those service agencies that carried regulatory or risk-control responsibilities. These settings included the (Australian) Medicare program, disability services, education departments, and community service departments.

Despite the extraordinary range of their harm-reduction responsibilities, participants in such programs have no trouble at all understanding that their core tasks share the same fundamental nature, and that this common basis means they also share a set of rather complicated and troublesome organizational and operational puzzles. To discuss those puzzles, they merely have to learn each other's vocabulary; they already understand each other's issues. They soon discover that they all grapple with the challenge of integrating different kinds of work – some functional, some process-based, and some organized around specific

concentrations of risk. They all seek clearer guidance on the awkward relationship between pursuing effectiveness in reducing harms on the one hand, and respecting the traditional regulatory values of fairness, consistency, proportionality, and predictability on the other. Everyone seems to want to understand the role analysis can play in systematic disaggregation of risks, and in the measurement of impact. And they very much want to understand what happens to the nature of managerial decision making, forms of organizational accountability, and the character of their relationships with the regulated community, when an agency tilts its focus towards the central purpose of harm reduction and away from functional, programmatic, or process-based traditions. As is usually the case, this particularly diverse class in Brisbane expressed their collective appreciation for the chance to spend a whole week together focused not on the generic challenges of government but on the specific challenges and consequences of having a harm-reduction mission.

Given the concentration of such issues within the regulatory aspects of governance, maybe the subject would be better termed *regulatory policy* than *harm-reduction*? For at least a decade, I thought so. My last book on this topic, aimed squarely at social regulators, was called *The Regulatory Craft*.<sup>3</sup> Here at the John F. Kennedy School of Government we advertised courses on this topic as being for regulators and enforcement officials. If others applied, we would advise them they probably did not belong, and should consider alternate programs. Over the last few years, however, the number of non-regulatory applicants seemed to rise. Applications came from officials in education and health; some from the private sector interested in corporate risk management; several from not-for-profit institutions who, while not regulators, were nevertheless committed to important causes of the harm-reduction type: anti-discrimination, protection of human rights, prevention of genocide, counter-terrorism, alleviation of poverty, and (of course) public health officials interested in disease control. Noticing the trend over time, I became a little slower to send them away and a little more eager to hear why they had applied. “Because,” they said, “what you’re teaching here is operational risk control, and we do that too.” They were making, on my behalf, a claim I had been reluctant and deliberately slow to make: that the core elements of the art of harm-control didn’t require the backdrop of regulatory policy, and that if we took away the restrictive setting of government regulation, and allowed in

other players engaged in harm-reduction endeavors, that we would still all share a *subject*; and one with enough meaty challenges and important consequences to be worth formulating and developing.

A significant proportion of this book will examine an important phenomenon around which such an expanded audience might gather: that is, the emergence, across a very wide range of harm-reduction domains, of some very specific and distinctive patterns of operational and organizational behavior. These behaviors not only appear across a wide variety of harm-reduction endeavors; they also reflect a rather deliberate focus on the reduction of *bads* as opposed to the construction of *goods*.

The summary phrase I've used for the regulatory audience to label this operational approach is a beguilingly, and perhaps misleadingly, simple one: "Pick Important Problems, and Fix Them." However simple that sounds, it turns out that organizing around carefully selected and important pieces of a risk – rather than around traditional programmatic or functional tasks, or around core-high-volume operational processes – is extraordinarily difficult for agencies or institutions to do. Even if they manage to do it *once* for something special, many organizations have no place for such conduct within their routine operations.

Despite the difficulties involved, and the apparent novelty of the method, more and more organizations are learning to act this way, organizing around carefully delineated risk-concentrations or problem areas, and demonstrating specific *harms reduced* as a result. What sorts of harms do they address this way? All sorts; with many different shapes and sizes, and across a broad spectrum of professional areas. Here are a few miscellaneous examples of harms or problems which have been recently identified, analyzed, and then substantially reduced through the design and implementation of tailor-made interventions:<sup>4</sup>

- A pattern of unlawful filling of shorelines and unlawful removal of shoreline vegetation, associated with property owners installing sandy beaches, endangering the water quality in two outstanding surface water systems – the Butler and Clermont Chains of lakes in central Florida. The Florida Department of Environmental Protection carried out this "Environmental Problem Solving" project between October 1999 and September 2000. All ninety-four violations apparent at the outset were dealt with, ninety of them through voluntary

restoration projects resulting from a carefully targeted public outreach and information campaign, and the remaining four through enforcement action.

- Pervasive piracy of copyrighted materials in Nigeria. The Nigerian Copyright Commission launched a multi-party anti-piracy initiative in 2005, aimed especially at organized industry groups engaged in counterfeiting CDs, VCDs and DVDs. At the outset, an estimated 90 percent of such products circulating in Nigeria were pirated copies, and Nigeria was regarded as a major supplier of pirated materials for the region. The STRAP program (“Strategic Action Against Piracy”) involved as many as twenty national and international organizations at various phases, and focused significant enforcement attention and a new monitoring regime on roughly fifty optical disk plants that appeared to account for much of the high volume production. As a result of the project, in May 2007, the US Government removed Nigeria from the “301 list” of countries where piracy and counterfeiting is regarded as pervasive. This delisting is a landmark achievement for a developing country and a first in the annals of Nigeria’s anti-piracy efforts.
- A pattern of injuries and fatalities caused by poorly maintained or improperly operated fairground rides. This project was conducted by staff from the Department of Labor & Environment in Nova Scotia, Canada, and won that Department’s annual prize for “regulatory excellence” in 2006.<sup>5</sup>
- Injuries to infants caused by falling down stairs whilst using baby-walkers. Emergency department injuries involving baby-walkers were reduced almost 90 percent from roughly 25,000 per year in the early 1990s to 2,600 in 2005. The US Consumer Product Safety Commission tackled this problem, accepting as a constraint the fact that they would not actually be able to justify a complete ban on baby-walkers. Their efforts instead focused on producing a revised voluntary standard for manufacturers with design modifications to limit baby-walkers’ directional mobility and increase tip-over resistance once the walker stopped with one or more wheels over the edge of a stairway.<sup>6</sup>
- The illegal passing of red signals by trains. In the Netherlands, analysis of train derailments and collisions has shown that in nearly every case the accident is preceded by the illegal passing of a red signal. Authorities have therefore organized a collaborative effort to focus

attention on this particular precursor to rail disasters. The project involves railway companies, infrastructure administration, contractors, rail traffic control and environmental planners, all working together to pick apart the multiple human behavioral and technical contributors to this phenomenon, with the goal of substantially reducing the frequency with which red signals are passed.

- Dangerously high blood-lead concentrations for bridge painters in New Jersey resulting from constant exposure to lead-based paints. This was one of the very first projects conducted by a “Strategic Intervention Team” at OSHA’s Area Office in Parsippany, New Jersey, under an organizational approach labeled “The Problem-Solving Approach to Hazard Mitigation in the Workplace.”
- Severe underinsurance of homes (at levels below total replacement cost) which, when coupled with inflated rebuilding costs in the wake of a substantial disaster, imposes unmanageable financial burden on homeowners at a time of significant distress. A project to address this problem was launched by the Australian Securities and Investments Commission, which noted the particular misery caused by substantial underinsurance in the wake of the devastating Canberra bushfires in 2003.<sup>7</sup>
- A repeating pattern of fatalities and critical injuries to electricians while (a) working on 347 volt lighting systems, or (b) using certain types of multi-meters that have a tendency to explode. Ontario’s Electrical Safety Authority launched two projects aimed at these hazards in 2005 following analysis of injuries and fatalities for electricians.
- Drug-smuggling across the Mexico/US border involving concealment of drug packages between the double-skinned walls of refrigerated trucks. The US Customs service tackled this problem under their “Strategic Problem Solving” initiative in drug interdiction, launched by the agency’s Office of Enforcement in 1995.<sup>8</sup>

For many regulatory agencies, organizing around specific *bad*s turns out to be a substantial departure from business as usual. Perhaps that helps explain why, when they do it well and significant harms get suppressed as a result, these agencies often win awards for *innovation*.<sup>9</sup> Why such behavior should be regarded as innovative has always intrigued me. One might imagine that identifying and controlling risk-concentrations that fall within an agency’s purview should be regarded as a perfectly ordinary competence, central to achieving the agency’s

core mission. I'm not entirely sure whether the innovation awards, when they do come, are for the specific *solutions* that the agencies invented (which are invariably novel and uniquely crafted to the specific problem addressed), or for the *modes and patterns of thought* that enabled officials to focus on specific risk concentrations, understand their characteristics, and so invent effective solutions. I worry that the prizes are mostly for the former (the solutions), and I see many agencies falling into the trap of trying to replicate these specific solutions elsewhere, often in circumstances where the particular solutions don't quite fit. Surely it would be more valuable to understand and codify the latter – the modes of thought and action which make harm-reduction efforts effective – and to understand what it takes to replicate them; better still, to understand what it would take to make such conduct the new organizational norm.

The habits of mind which these “innovators” exhibit have something in common with the skills involved in a relatively mundane task: the undoing of knots. Give a knotted mass of string to an adult, who has developed all of the relevant cognitive skills (and maybe had some experience too), and watch how they behave. Notice how they hold the whole object up to the light, and look at it this way, then that way, turning it around and around, examining it diligently from all sides – careful all the time not to pull or tug or to make matters worse – until they begin to understand the *structure of the thing itself*. As the structure of the knot becomes clearer, so the components or stages of a plan begin to form in their minds . . . “maybe if I can loosen this strand first, it will loosen that one . . . in turn that will free up the main one – at which point I'll need to pass this tangled mass here through the opening that should develop . . .” and so on. If they understood the structure correctly, and fashioned a plan accordingly, the knot eventually falls apart, and is no more.

By contrast, give the same knot to a child, who has yet to develop this particular set of cognitive skills, and observe their behavior. Witness their frustration as they tug and pull and generally make matters worse. Note the relative lack of attention to observation and discernment of the nature of the thing, or the particularities of its structure. Note the alacrity with which the child jumps into action, applying crude methods that usually fail.

In the regulatory field we have a growing list of harms undone, knots untied, risk-concentrations eliminated or substantially mitigated.



Invariably the knots undone by regulators, or others who act in this vein, are not broad, general phenomena (at the level of “air pollution,” or “corruption,” or “motor vehicle accidents.”) Nor are they minutiae, representing single incidents (of crime, or injury, or death). These knots untied, these harms undone, all lie *in between*, where the object of study is larger than a single incident or event, but smaller than a general class of harms. It is in this *in-between* realm where much exciting work seems to take place, amid the complex and multi-layered texture that connects individual incidents at the bottom to entire classes of risk (with their one or two word descriptions) at the top. The operational work of control, for the most part, belongs neither at one extreme nor the other, but in this messy middle ground. It is in this middle ground, amongst the parts and the sub-parts of broader classes of harm, that we lack navigational guidance as well as established vocabulary. The knots addressed by these successful innovators are all clearly identified sub-components of a general class of harm, and they are referred to variously as *problems*, or *issues*, or *patterns of incidents*, or *risk-concentrations*, or *specific harms*, or sometimes as *trends*.

The crafters of these successful harm-reduction strategies, in each case, are somewhat slow to jump into action. They take time to engage in systematic but open-minded inquiry, seeking first to understand the dynamics and components of the harm. They slice and dice the overall risk, cutting it this way and that, exploring many different dimensions in which concentrations might be specified or become apparent. Then, as significant concentrations or parts of the risk come slowly into focus, and appear worthy of specific attention, these practitioners examine these intermediate objects (the knots, or concentrations) more closely still, molding and testing different problem-definitions and specifications, setting the scale of the overall endeavor, separating and enumerating the distinct knots they find, and discerning the structure of each one. All of this, even before any action-planning begins.

Analogies have their limitations, of course. Practitioners of risk control, whatever their field, might object that this analogy seems to undervalue preventive approaches. Why wait until you have a knot to untie? Why not work out in advance the rope handling disciplines or treatments that would prevent the knots from forming in the first place? Why not create a knot-free zone? Does this analogy not limit our attention to ex post remedial approaches?

This objection would be potent indeed if the knots related to *incidents* (e.g. specific crimes, or crashes, or calamities). In that case, accepting the very existence of a knot limits one's options to choosing among reactive treatments, and inhibits attention to earlier intervention or prevention. But the knots in this business do not represent individual incidents. They represent *patterns* of incidents, with frequencies and characteristics which develop, and which may repeat, over time. In choosing how to deal with a *pattern* of incidents (where the long term goal involves suppression of the entire pattern) preventive strategies are by no means precluded. In figuring out how to unpick the problem, we make sure to hold in mind the full range of technologies, tools and tactics for control. And, mindful of the chronological unfolding that precedes any one calamity, we should surely keep in mind the possibility of picking any one, or several, of the moments in that chronology at which to target an intervention. So long as one understands that the knots exist and are preferably addressed as higher level objects rather than specific incidents, then this particular analogy does not focus attention any more on reactive strategies than on preventive ones; nor vice versa. In the harm-reduction business we should seek lasting and resource-efficient strategies; and we should deliberately avoid any ideological preferences as to tools, tactics, or times for intervention. That's the essence of craftsmanship: the ability to pick the right methods and tools for the job. Selection of methods, and selection of the right moments for intervention, ought to remain tactical, problem-specific choices.<sup>10</sup>

Just as specific analogies have their limitations, so too do specific words. The financial sector laid an early claim to the phrase *risk-management*, by which they referred to the challenge of balancing risk and return in investment portfolios.<sup>11</sup> In more common and broader usage, there remains much overlap and ambiguity between the meaning of "risks" and other undesirable commodities like "problems" and "harms." In general, *risk* seems prospective and not very likely. *Problem* seems more current and certain. That could mean, for some, that a *problem* is merely a *risk* which did actually materialize; in which case *accidents* become "tangible ex post fact manifestations of risk."<sup>12</sup> The risk literature still focuses, for the most part, on exposures and outcomes which are probabilistic in nature, rather than deterministic or predictable.<sup>13</sup> Some scholars have used a distinction between *risks* – the by products of human decision making in adoption of