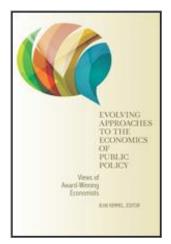
W.E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH

Upjohn Institute Press

Efficient and Effective Economic Regulation in a Confusing Technological Environment



Michael J. Piore Massachusetts Institute of Technology

Chapter 6 (pp. 145-162) in: **Evolving Approaches to the Economics of Public Policy: Views of Award- Winning Economists** Jean Kimmel, editor. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2016 DOI:/ 10.17848/9780880995146.ch6

Copyright ©2016. W.E. Upjohn Institute for Employment Research. All rights reserved.

Evolving Approaches to the Economics of Public Policy

Views of Award-Winning Economists

Jean Kimmel *Editor*

2016

W.E. Upjohn Institute for Employment Research Kalamazoo, Michigan

Library of Congress Cataloging-in-Publication Data

Names: Kimmel, Jean, editor.

Title: Evolving approaches to the economics of public policy : views of award-winning economists / Jean Kimmel, editor.

Description: Kalamazoo : W.E. Upjohn Institute for Employment Research, 2016. | Includes index.

Identifiers: LCCN 2016038681 | ISBN 9780880995122 (pbk. : alk. paper) | ISBN 0880995122 (pbk. : alk. paper) | ISBN 9780880995139 (hardcover : alk. paper) | ISBN 0880995130 (hardcover : alk. paper) | ISBN 9780880995146 (ebook) | ISBN 0880995149 (ebook)

Subjects: LCSH: Political planning. | Economic Policy. | Microfinance.

Classification: LCC JF51 .E86 2016 | DDC 320.6-dc23

LC record available at https://lccn.loc.gov/2016038681

© 2016 W.E. Upjohn Institute for Employment Research 300 S. Westnedge Avenue Kalamazoo, Michigan 49007-4686

The facts presented in this study and the observations and viewpoints expressed are the sole responsibility of the authors. They do not necessarily represent positions of the W.E. Upjohn Institute for Employment Research.

Cover design by Carol A.S. Derks. Index prepared by Diane Worden. Printed in the United States of America. Printed on recycled paper.

Efficient and Effective Economic Regulation in a Confusing Technological Environment

Michael J. Piore Massachusetts Institute of Technology

This chapter focuses on the role of government in a market economy and the balance between government regulation and the "free" market. I examine this problem through the lens of several research projects in which I have recently been engaged, particularly a project on alternative approaches to the administration of labor standards, but also several studies in a very different domain—the organization of product design and product development. I hope, however, to make clear the relationship between these disparate activities. And, indeed, an important part of my goal in this chapter is to widen the lens through which we think about economic activity.

The debate about the market and the role of government in its regulation is an old one, stretching back to the Industrial Revolution at the beginning of the nineteenth century (Polanyi 1944). But the contemporary variant is really rooted in the Great Depression of the 1930s. The Great Depression was widely viewed as the product of an unregulated market economy run amok, and most of the regulatory institutions debated today are a product of the reaction to the unregulated market in that period. In the interim, between the origins of these institutions in the 1930s and the debate today, opinion on the need for them has oscillated back and forth in what Polanyi, writing at the beginning of the period but looking back at industrial history, calls the "double movement." The prosperity of the immediate postwar period as mediated by the institutions of the 1930s seemed to vindicate the regulatory movement. The stagnation of the 1970s produced a reaction, not simply against regulation but against government in general, and with the election of Ronald Reagan in 1980 a process of deregulation was initiated that continued through the next 30 years. One can in fact argue that the process of deregulation had begun even earlier in telecommunications and the airlines, but it was at first focused on those particular industries and not on economic regulation more broadly. Following the financial crisis of 2008, the pendulum started to swing back in the other direction. There was a widely shared perception that deregulation had gone too far, a renewed appreciation that the market operates within an institutional framework created by government and managed by government agencies, and a recognition that the failure to maintain this framework makes the society vulnerable to a variety of excesses and abuses. In this sense, there is agreement about the need for some regulation. But there is nothing like a consensus about what that framework of regulation should look like.

REGULATION IN THE LABOR MARKET

But while the emphasis in the debate has oscillated widely with changes in the economic environment over the course of the postwar period, the underlying arguments for and against regulation have not varied. The case in favor of the unregulated market is that it leaves prices free to reflect relative scarcity, and it places businesses under competitive pressure to pick the most efficient way to use limited resources. Regulation introduces rigidities, which interfere with these adjustment mechanisms (Hayek 1948). In so doing, it limits the ability of the economy to respond to variations in supply and demand, variations that occur for numerous reasons that cannot be anticipated. These variations are occasioned in the short run by accidents of weather, sudden changes in tastes, or the misfortunes of particular businesses or sectors; in the intermediate run they are produced by the ebb and flow of economic activity over the business cycle; and in the long run by technological changes that render older approaches obsolete and require the constant accommodation and adjustment of business practices and institutional structures.

In the case of work regulation, the argument is that it leads to rigidities in wages and in employment obligations in general, and that these rigidities in turn lead to the inefficient deployment of labor and specifically to unemployment. These effects are especially strong at the bottom of the labor market, where the regulations are binding; hence, regulation will distort the income distribution. These basic concerns have been compounded in recent years by the belief that new technologies and expanding global competition have so changed the economic environment that the particular regulations that were developed in the 1930s are outdated and, in some versions, irrelevant (Weil 2014).

Forms of Work Regulation

The image of work regulation that underlies this argument is, however, derived from the administrative system that is characteristic of the United States, and that system is far from universal. An alternative administrative approach (and one that is a good deal more flexible) is found in France, most of southern Europe, and Latin America—what I will call in this chapter the Franco-Latin system. The contrast offers a very different perspective on regulation, one in which regulations can work along with market forces and not necessarily against them. The contrast here is between a specialized sanctioning system (as it is termed in the shorthand vocabulary used by the International Labour Organization) and a general compliance one (von Richthofen 2002).

The U.S. system is specialized and sanctioning. Work regulations are spread out over almost a dozen different federal agencies: the Wages and Hours Division of the Department of Labor, the Occupational Safety and Health Administration (OSHA), the Employee Retirement Income Security Act of 1974 (ERISA), several agencies that deal with immigration, the National Labor Relations Board (NLRB), the Federal Mediation Service, the Equal Employment Opportunity Commission (EEOC), and so on. Many of these federal agencies have analogues at the state level which share the same territory. Each agency thus has a narrow jurisdiction and a limited mandate. It specializes in and focuses upon that dimension of work with which it is directly concerned. The underlying model of enforcement and compliance is one of deterrence through sanctions. Violations of regulations are penalized—usually through a fine, much more rarely through a prison sentence. The penalty basically discharges the obligation of the enterprise, and the penalty also serves in theory as a deterrent to violation. The size of the penalty and the probability of discovering a violation through complaints or inspections determine the incentive to comply with the law. When compliance is inadequate, these can be adjusted accordingly, either by raising the fine (also by possibly increasing the prison sentence) or by increasing the chances of getting caught—by, for example, increasing the number of inspectors. The level of fines and the number of inspectors are the basic parameters which control the effectiveness of the system.

The Franco-Latin system of work regulation is by contrast built on a general conciliation/remediation model (Piore and Schrank 2006, 2008; Schrank and Piore 2007). The model is general in the sense that the whole of the labor code is administered by a single organization. The line agents of that organization (the labor inspectors), when they enter a given enterprise, can cite the organization for violations of any part of the code. But more basically, the employer cannot discharge his or her obligations by payment of a penalty alone. Employers are supposed to come into compliance with the law. The role of the inspector is to help them do so. Toward that end, the inspector is empowered to develop a plan that corrects violations of the law—if necessary, through reforms in technology and managerial practice. He or she also has the power to grant the enterprise the space to implement these reforms gradually over time.

The system gives the inspectors wide discretion in how the regulations are actually administered. The discretion derives from the very wide variety of provisions of the law over which the inspector has jurisdiction. He or she could not possibly inspect for every one of these provisions and hence must pick and choose those provisions upon which to focus. The ability of the inspector to institute a plan that brings about compliance gradually over time further expands that inspector's effective powers and discretion. In sum, the capacity for the inspector to adapt the rules and regulations in this way gives the system a potential flexibility to adjust to the peculiarities of particular enterprises and to the economic and social environment in which they operate-a potential that the U.S. system completely lacks. The inspector can, in effect, focus on health and safety violations when unemployment is low and alternative jobs are readily available if the enterprise has trouble bearing the cost of correcting these, but he or she can look the other way when unemployment is high and the competitive environment in which the firm is operating is tight. Similarly, the inspector can enforce wage

laws less stringently when unemployment is high and the market pressures would normally lead to lower wages.

But additionally, and significantly, the emphasis on compliance should lead the inspector to look for the underlying causes of the violations and seek remedies in managerial practice or technology that actually address the problem at its root. In this way, the system encourages inspectors to look for support from other government programs that address these problems, such as manufacturing extension programs or employment and training. The U.S. system, by contrast, leads the inspectors to focus narrowly on what are, in effect, symptoms of the way the company does business. It is like the difference between a doctor focusing on the symptoms and one focusing on the disease.

Whether or not the labor inspection system actually exhibits this kind of flexibility depends on how the inspectors make their decisions and how the system is managed. Interviews with inspectors in France, Spain, and Latin America suggest that they are best understood as "street-level" bureaucrats. They belong to a class of public servants who work in organizations where substantial discretion is lodged in the agents at the bottom of the organizational hierarchy (Lipsky 1980). Organizations of this kind that have been studied in the academic literature include social workers, classroom teachers, and forest rangers. But they also include civil servants whose power and discretion is not generally recognized, such as immigration agents or program auditors (Piore 2011).

The canonical street-level bureaucrat is the police patrolman on the beat (Wilson 1968). In principle, the police are charged with enforcing the law. But in fact much of police work is really about maintaining social order. The law becomes an instrument in the pursuit of order and is evoked situationally. Social order, moreover, is an ambiguous concept that is dependent on context and varies with the moral code of the community. Thus, technically, prostitution is illegal at all times and in all places, and prostitutes in middle-class, suburban neighborhoods will be arrested on sight, but de facto prostitution is generally tolerated in the downtown entertainment districts of most large cities.

How do street-level bureaucrats make these decisions? In some part, these decisions are idiosyncratic; each agent has his or her own moral code. But in most such organizations, when the agents work with each other for a prolonged period, they develop a common code of behavior. The agents come to judge each other by the degree to which their actions conform to that code, and agents themselves seek to act in conformity with the code because they value the opinions of their colleagues: their own sense of self-worth is bound up with the judgment of the group. The code of behavior that governs their decisions is something like a language-a simile to which we will return below-and, like a language, it evolves through use. But the code also reflects a set of values that new recruits bring with them to the job, as these values are refracted through the process of training and socialization to which the recruits are subject once they are selected to join the organization. And the code then evolves over time through continual interaction among members of the organization as they discuss cases, particularly new and unusual cases. Those discussions proceed continually and informally through employees' interacting on the job or relating "war stories" as they socialize with each other on breaks in the work routine or while relaxing together after work. In some organizations, these discussions are formalized in group meetings with higher levels of management, where the priorities of the organizations are presented and conflicts among organizational goals are debated and resolved.

The behavior of street-level bureaucrats can be contrasted to two other models that dominate discussions of organizational behavior. One is the economist's model of self-interested rational choice-ideally, in a market economy, constrained by the "prices" generated by the interaction of the actors in competition with each other. The agents in a street-level bureaucracy are not less self-interested than in the economist's formulation, but their interest is centered on the judgment of their colleagues. Their prestige in their own mind is dependent on how their fellow workers perceive their work. The new public management is an attempt to simulate the market by identifying quantitative measures of organizational goals and rewarding the agents in accordance with their achievements. One can think of this approach as trying to substitute monetary rewards for the judgment of peers. It fails in part because collegial approval is not fungible and cannot be reduced to monetary compensation. The model also fails in street-level bureaucracies because the objectives that measure what the organization is trying to achieve are too numerous and complex to be reduced to quantitative measures, and the weights attached to the different goals vary too widely with the economic and social environment. How do you measure the effectiveness of the police? Is it by the amount of crime? And if so what kinds of crime? Or is it by the sense of an orderly community? Or a feeling of safety they engender in the citizenry? And if the last, how do you weigh the concerns of the different citizens? How do you compare the white woman's fear of the black teenager in the ghetto to the sense of insecurity and the humiliation felt by those teenagers when subjected to continual police "stop and frisk" encounters?

The alternative to the market in the conventional formulation is a classic Weberian bureaucracy, where the agents are instructed in how to behave by directives from above and are punished when they fail to comply. Such bureaucratic regulations produce precisely the rigidities that are the subject of the conventional critique of regulation (Crozier 1964). The higher-level directives do not adjust—or do not adjust fast enough-to the flux and uncertainties of a market economy or to the peculiarities of particular enterprises and the socioeconomic environments in which they are operating. They end up, for example, treating an enterprise in temporary distress because of accidents of nature or of the market in the same way as a firm that seeks a competitive advantage by exploiting its workforce and violating the protective rules and regulations. They apply the same regulations in regions with high unemployment and in regions with very tight labor markets that can afford to lose the jobs that a strict enforcement of health and safety regulations or of wages and hours laws might imply would be lost.

But while street-level bureaucracies do not lend themselves to either hierarchical control or to management through simulated market incentives, the social environment that governs the decisions the agents make can be "managed" (Piore 2011). The organization actually possesses a number of instruments for doing so. For convenience, we would group these instruments under four headings. First, management controls the processes of recruitment and selection of new candidates, and hence the values that new agents bring with them when they enter the service. In the case of labor inspectors, the social codes seem especially susceptible to the mix of candidates from working-class families relative to those from middle-class backgrounds more sympathetic to business; other dimensions stressed in our field interviews with labor inspectors include the mix between lawyers, engineers, medical doctors, union officials, ex-military, and women versus men. Second, management controls the processes of socialization and training once the new recruits enter the service. The mix between formal training on the one hand and apprenticeship on the other is especially important. In the latter, new recruits are sent out into the field with experienced inspectors, and in this way values and behavioral patterns are passed on directly from one generation to another. Apprenticeship also emphasizes tacit knowledge. Formal training, on the other hand, can stress or counteract the biases introduced in the recruiting process by emphasizing explicit, formal criteria of evaluation.

A third range of variables that management controls is that of how self-contained the organization is, how open it is to outside influences and values, and how dependent upon the judgment of their colleagues the agents actually are relative to other groups in society with whom they interact. At one extreme in this regard is the military, whose members typically live and work in closed environments, with their own recreational facilities, medical care facilities, schools for their children. etc. This environment insulates military personnel from outside contacts that might compete with military values in judging their self-worth. In addition, members of military organizations become dependent on their colleagues not only for social validation but for physical protection in hostile environments, thus reinforcing their concern with the approval and support of their colleagues. This is true of police work as well. The balance between the support that line officers receive from their colleagues versus that offered by their supervisors in dangerous situations is also an important variable in determining how much influence the latter can exert over the decisions of their subordinates. Actually, in some environments, it is also true of labor inspectors. In France several years ago, two labor inspectors were shot dead by an irate farmer whose premises they were inspecting, and the failure of the government to speak out forcefully condemning the killings has colored the relationship between the line inspectors and their supervisors ever since.

The fourth way—and in many regards the most interesting way in which management can exert influence over the decisions of streetlevel bureaucrats is through the ongoing conversation surrounding the regulation process. My own sense of the importance of this conversation and what it means to "manage" it actually comes from a series of studies on product design and development, studies of what might be termed, in a very loose sense, "innovation." Conventional economics does not yield a clear theory of "innovation." It deals primarily with how choices are made among a known set of alternative technologies. The properties of such technologies may not be known with certainty, but they are assumed to be sufficiently well identified that one can assign probabilities or expectations to key characteristics and then work to develop the characteristics of the alternatives so as to minimize their costs or maximize their contribution to a specified set of goals. But new product development often involves *radical uncertainty* (Knightian uncertainty) of choices in a situation where one does not even know what the alternatives really are.

Among the products that emerged in our own studies, the canonical case is the cellular telephone (Lester and Piore 2004). The cellular phone is a combination of radio and telephone technologies, inspired by the two-way radios used by police and by taxis. The first such devices were bulky car-mounted instruments. People had only the vaguest idea of why one might want one or how they might be used. The device had to be developed to be commercially viable, but none of the developers knew exactly what he or she was developing. In addition, the radio and telephone companies that had to cooperate to work out the mechanics of the device were from completely different engineering and business cultures. Telephony had a tradition of quality engineering, of making almost perfect products, sold to expert customers. Emblematic of the ethos of the industry was the fact that the dial tone was always there when you picked up the phone, and calls were virtually never lost. Radio engineers were by comparison cowboys; they understood the technology empirically; they accepted a reality in which the signal faded in and out and failure was corrected on an ad hoc basis. Radios were produced by large, expert companies, but they were sold to consumers for whom the product was ancillary to their main concerns.

How did these two antagonistic business and engineering cultures learn to work together? How did the product they produced evolve from a clunky car radio to a perfectly portable instrument that people carried around in their pockets and to which were attached a range of functions that included not only two-way vocal communication but an ever-expanding list of other capabilities, from video games and written messages to still and video photography?

The cellular phone as it exists today emerged out of what I term in my organizational research an ongoing conversation—a conversation

not only among the disparate engineers and managers who ultimately had to collaborate to produce the new product, but also between the producers and the consumers who would ultimately purchase and use it. The conversation proceeded in two phases. In the first phase, the participants were basically developing a common language in which they could understand each other and could tolerate and ultimately appreciate their differences. In the second phase, they used the new language to discuss various ideas as to how the product they were developing might be used. We called this process interpretative; it was open-ended and did not involve commitment to any particular model or design. Out of this ongoing interpretative conversation, at various points in time, particular product ideas were selected. These were then developed in a totally different process, an analytical process in which the engineers sought the optimal design. But it was the interpretative process through which they handled the radical uncertainty involved in the creation of a totally new product.

We came to think of that interpretative process as being like a cocktail party. Like guests at a party, the engineers and managers engaged in seemingly idle conversation, moving back and forth from what we would classify in a rational choice framework as ends (what is the "thing" good for? how will it be used?) and means (how could it be powered if we move it out of the car? what kinds of material would make it light enough to be carried but durable enough to withstand being banged around in a pocket or purse?). The role of the manager in this process then becomes like that of a host at a party: invite the guests, introduce them to each other, stimulate conversation among them, break up conversations that become too antagonistic, and introduce new guests to conversations that seem to be becoming stale and repetitive—making sure at all times that the discussions are moving forward, that the guests are engaged, that new perspectives are emerging.

A parallel set of conclusions are emerging in a series of studies of federal agencies that fund research and development with which I am currently involved. The agency that is closest to the innovative frontier, generating new products continuously, is DARPA (the Defense Advanced Research Projects Agency). Since its creation in 1958 in response to the surprise launching of the Soviet space satellite Sputnik, DARPA has been key in the creation of a wide array of revolutionary technologies, from the World Wide Web, the cellular phone, and a host of new materials, to more narrowly military technologies such as the stealth bomber. Other major federal agencies funding research—the National Science Foundation, for example, or the National Institutes of Health—select projects and allocate funds through a peer review process. DARPA projects, by contrast, are created and managed by a project manager. The project manager has wide discretion to pick the particular area and type of technology that he or she is going to develop and the process through which that development is going to take place. The process that the DARPA program manager uses to do this parallels the process that emerged in our case studies in design and product development (Fuchs 2010).

The process begins with an often vague idea of a new technologyusually with some potential military application—but often an application that is so ill-defined that one might think of it as an excuse rather than a target. The project manager then seeks to identify industries and areas of science and technology that might contribute in one way or another to the development of the idea, very often finding people who are strangers to one another and who in the normal course of events might never communicate-not unlike the radio and the telephone engineers who were brought together to create the cellular phone. These potential collaborators, once identified, are brought together in informal meetings, seminars, and conferences to discuss the project and their potential contribution to it. Only after this discussion has proceeded to the point where these people have, first, developed a common language and, second, worked together to identify specific technological issues that must be addressed does the project manager formulate a set of research tasks and issue requests for proposals (RFPs). Most notably, at DARPA the discussions surrounding the project continue even as specific research is taking place. The agency as a whole, and the project managers individually, are forever convening seminars and colloquia in which the contractors are required to present their results to each other and review and comment on the work of their colleagues. In this way, an open-ended interpretative conversation is always ongoing in the background, however specific, narrowly focused, and goal-oriented the research itself becomes.

How does this understanding of innovation map onto the Franco-Latin work inspectors or to street-level bureaucrats more broadly? The street-level bureaucrats have been variously described as "the reflective

practitioner" (Schön 1983) or "the sociological citizens" (Silbey 2011). At its best, their task is to craft solutions to the particulars of each case. The DARPA project manager is in this sense a street-level bureaucrat. Or, the other way around, each work inspector becomes an innovator, and each case that he or she handles becomes like an innovation. The material out of which that innovation is constructed-the substance but also the practice—is drawn out of the ongoing conversation occurring in the background of the work process. And one can imagine management in a street-level bureaucracy managing the conversation in much the same way as product-development managers in private industry or the project manager at DARPA: like a host at a cocktail party. The singular exception is that, in most cases, when the manager arrives on the scene, the cocktail party is already in process—a conversation is already ongoing among the agents; the work group has already developed a language and vocabulary in which they are accustomed to talk to each other.

Finally, the analogue to innovation is not limited to day-to-day operations; there are often cases that are quite literally innovative situations, where the problem is fundamentally different from those that have arisen before, and where even experienced inspectors lack a vocabulary for defining what the underlying problem is and how to address it. Where this is the case, the analogy to the DARPA project manager is even stronger. This is especially true at the current moment, in which the advent of information technology, new forms of communication and transport, and new global trading regimes make existing work regulations appear anachronistic.

The interpretive conversation among street-level bureaucrats—and in our case labor inspectors in the Franco-Latin model—goes on spontaneously, often informally, in the background of day-to-day life in the organization as the agents go about their work. And one can say that the solutions they fashion to the problems they encounter are drawn out of this ongoing conversation in the same way that the succession of cellular telephone models are drawn out of the interpretive conversation among managers and engineers. But that conversation can also become a tool that management can organize and direct by playing the host at the cocktail party—convening formal meetings, inviting outside experts to participate and interact with the front-line agents, introducing particular topics that would not otherwise be discussed or, at least, made the explicit focus of the conversation, even supporting academic research on different forms of work organization, technical processes, and business strategies that could inform the discussion.

It is admittedly hard to imagine the United States adopting the Franco-Latin model of work regulation. The current state of labor market regulation favors the power of business, and the alignment of political forces favors the status quo. One could imagine a greater coordination among the various agencies but not a wholesale reform that would create a unified system. But in other regulatory arenas, the U.S. system is more unified, and the agents of the regulatory agencies operate with considerable discretion, much like a street-level bureaucracy. Examples include public prosecutors' offices at both the state and the national levels (Chattin 1996; Misner 1996), the Forest Service (USDA 2002), drug and medical device regulation (Carpenter 2010), and energy.

Paradoxically, the regulatory domain that in the United States is closest to work regulation is finance. Here too, regulatory authority is dispersed among numerous federal organizations and in many areas is shared with the states as well. Here too, as well, there has been an intense debate about the relevance of the regulations initially conceived in the 1930s for the contemporary economy. But a major difference between finance and work regulation is that, despite the dispersion in finance, there is a single agency that oversees the sector as a whole: the Federal Reserve. The Fed may not have the power to coordinate the regulatory structure through administrative directives outside its own jurisdiction, but it does animate a debate, an interpretative conversation, that resonates throughout the sector and the many agencies that impinge upon it. This conversation concerns the goals of financial regulation, the "means" or instruments available to achieve those goals, and the relative weights to be assigned to alternative, possibly competing goals, explicitly weighing full employment, price stability, and risk management against each other and adjusting the balance among them over the business cycle.

The financial service sector and the Fed's role in managing the ongoing conversation within it in recent years is, however, a cautionary tale (Reinhart and Rogoff 2009). As chairman of the Fed, Alan Greenspan argued that new technologies had rendered obsolete the regulatory structures of the past, and the discussion under his leadership and direction completely failed to anticipate the financial crisis of 2008. It failed to do so, I believe, because the people invited to the "cocktail party" came from too narrow a segment of society. But the point here is less the particular failings of the past than the recognition of the importance of the ongoing conversation and the way it is organized as a critical instrument of public policy in a dynamic but also uncertain economy (Bernanke 2015).

CONCLUSION

This chapter's discussion of regulation has extended well beyond typical economics discussions of this topic. Why is this the case? Economics is virtually alone among the social sciences in taking as its mission not only to develop a better understanding of the world but, through that understanding, to better human welfare within it. In that mission we have in recent years failed—and by some measures failed miserably, at enormous cost to human life and welfare, both individual and social. In work regulation, the most conspicuous failure is represented by the factory building collapse in Bangladesh in 2013, the worst industrial accident in history. Over 1,000 workers died in a factory producing goods for the U.S. market, commissioned by and later sold under U.S. brand-name firms competing in market conditions created by the abrupt end of the Multi-Fiber Arrangement, which regulated worldwide trade in textiles and clothing from 1974 to 2004. The United States promoted the end of this agreement as part of a policy of globalization, designed and supported by the backing of virtually the whole of the economics profession. The building collapse was preceded by a factory fire that was in many ways a replica of the New York City Triangle Shirtwaist fire 100 years earlier, which we in the economics profession believed had taught the lessons of the dangers of unregulated work in the garment industry and how to prevent such dangers (Bhasin 2014). In the United States itself, we have just lived through the worst financial crisis since the Great Depression and barely averted a comparable crisis in the real economy. With very few exceptions, the profession failed to anticipate the crisis and, as just noted, promoted the elimination of regulations that might have moderated it or even prevented it. And we addressed the crisis by subsidizing a long list of major companies in finance and

manufacturing, while letting a host of rank-and-file workers go bankrupt, which meant they lost their housing and lifetime savings (Mian and Sufi 2014). We are now left with a legacy of unemployment and economic insecurity that is probably more acute than at any other time in the postwar period. All of this after four decades of slow economic growth in which average incomes have stagnated while earnings at the very top of the distribution have been allowed to rise progressively, so that the chief executives of major corporations (the kinds of major corporations that were the beneficiaries of the financial bailout) have risen from 40 times the incomes of the average employee to 250–300 times (Mishel et al. 2012).

Economics has created a framework that is designed to speak directly to public policy, but the analytical apparatus that we have brought to bear within that framework is inadequate to the problems we have set out to solve. We need a broader-based analysis, a broader understanding, first of human motivation and behavior and second of how knowledge develops and evolves in an uncertain world. I have tried here to point out instances of other social sciences from which those understandings might come, and how they might be applied to the formulation of public policy. I believe that that is the task economists face today. The basic lesson that emerges from the examination of the Franco-Latin model of work regulation, then, is that we need to turn much more deliberately and self-consciously to the question of how to manage that discretion, to understand the sociology of such regulatory systems, and to draw from sociology in a more self-conscious and deliberate way to develop and deploy the instruments' potential in such systems for supplementing the market to overcome some of the limits of a market economy.

Note

The argument of this chapter was developed in collaboration with Andrew Schrank and is presented in detail in our forthcoming book *Root Cause Regulation*.

References

- Bernanke, Ben S. 2015. *The Courage to Act: A Memoir of a Crisis and Its Aftermath*. New York: W. W. Norton and Co.
- Bhasin, Kim. 2014. "A Year after Deadly Collapse, Bangladesh's Garment Industry Remains Broken." Huffington Post, April 24. http://www .huffingtonpost.com/2014/04/24/bangladesh-factory-workers_n_5200427 .html (accessed April 25, 2016).
- Carpenter, Daniel. 2010. *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA*. Princeton, NJ: Princeton University Press.
- Chattin, Rebecca M. 1996. "Prosecutorial Discretion." Georgetown Law Journal 84(April): 887–899.
- Crozier, Michel. 1964. *The Bureaucratic Phenomenon*. Chicago: University of Chicago Press.
- Fuchs, Erica R. H. 2010. "Rethinking the Role of the State in Technology Development: DARPA and the Case for Embedded Network Governance." *Research Policy* 39(9): 1133–1147.
- Hayek, F. A. 1948. *Individualism and Economic Order*. Chicago: University of Chicago Press.
- Lester, Richard K., and Michael J. Piore. 2004. *Innovation: The Missing Dimension*. Cambridge, MA: Harvard University Press.
- Lipsky, Michael. 1980. Street-Level Bureaucracy: Dilemmas of the Individual in Public Services. New York: Russell Sage.
- Mian, Atif, and Amir Sufi. 2014. *House of Debt: How They (and You) Caused the Great Recession, and How We Can Prevent It from Happening Again.* Chicago and London: University of Chicago Press.
- Mishel, Lawrence, Josh Bivens, Elise Gould, and Heidi Shierholz. 2012. *The State of Working America*. 12th ed. An Economic Policy Institute Book. Ithaca, NY: Cornell University Press.
- Misner, Robert L. 1996. "Recasting Prosecutorial Discretion." Journal of Criminal Law and Criminology 86(3): 717–777.
- Piore, Michael J. 2011. "Beyond Markets: Sociology, Street-Level Bureaucracy, and the Management of the Public Sector." *Regulation and Governance* 5(1): 145–164.
- Piore, Michael J., and Andrew Schrank. 2006. "Trading Up: An Embryonic Model for Easing the Human Costs of Free Markets." *Boston Review* 31(5): 11–14.

——. 2008. "Toward Managed Flexibility: The Revival of Labour Inspection in the Latin World." *International Labour Review* 147(1): 1–23.

Polanyi, Karl. 1944. The Great Transformation. Boston: Beacon Press.

Economic Regulation in a Confusing Technological Environment 161

- Reinhart, Carmen M., and Kenneth S. Rogoff. 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.
- Schön, Donald A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
- Schrank, Andrew, and Michael J. Piore. 2007. Norms, Regulations, and Labor Standards in Central America. CEPAL—Serie Estudios y Perspectivas No. 77. New York: United Nations.
- Silbey, Susan S. 2011. "The Sociological Citizen: Pragmatic and Relational Regulation in Law and Organizations." *Regulation and Governance*, 5(1): 1–13.
- U.S. Department of Agriculture (USDA) 2002. The Process Predicament: How Statutory, Regulatory, and Administrative Factors Affect National Forest Management. Washington, DC: U.S. Department of Agriculture, Forest Service. http://www.fs.fed.us/projects/documents/Process-Predicament.pdf (accessed April 25, 2016).
- von Richthofen, Wolfgang. 2002. Labour Inspection: A Guide to the Profession. Geneva: International Labour Office.
- Weil, David. 2014. *The Fissured Workplace: Why Work Became So Bad for So Many, and What Can Be Done to Improve It.* Cambridge, MA: Harvard University Press.
- Wilson, James Q. 1968. Varieties of Police Behavior: The Management of Law and Order in Eight Communities. Cambridge, MA: Harvard University Press.