

“Efficient and Effective Economic Regulation in a Confusing Technological Environment”

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The problem that I want to discuss with you today is the role of government in a market economy and the balance between government regulation and the “free” market. I want to look at this problem through the lenses 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 domains---the organization of product design and product development. I hope, however, that you will see a relationship between these disparate activities. And, indeed, an important part of my goal in this presentation is to widen the lenses through which we think about economic activity.

The broad debate about the market and the role of government in its regulation is an old one, stretching back to industrial revolution at the beginning of the 19th century (Polanyi, 1944). But the contemporary variant is really rooted in the Great Depression of the 1930’s. The Great Depression was widely viewed as the product of an unregulated market economy run amuck, and most of the regulatory institutions debated today are the product of the reaction to the unregulated market in that period. In the interim, between their origins in the 1930’s and the debate today, opinion has oscillated back and forth between them in what Polanyi, writing at the beginning of the period but looking back at industrial history, called the “double movement”. The prosperity of the immediate postwar period as mediated by the institutions of the 1930’s seemed to vindicate the regulatory movement. The stagnation of the 1970’s 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 has continued through the next thirty years. One can in fact argue that the process of deregulation had begun even earlier in telecom and airlines but it was first focused on particular industries and not on economic regulation more broadly. With the financial crisis of the 2008, the pendulum has start to swing back in the other direction. There is a widely shared perception that deregulation has gone too far and a renewed appreciation that the market operates within an institutional framework created by government and managed by government agencies, and 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 businesses under competitive pressure to pick the most efficient way to use those resources. Regulation introduces rigidities which interfere with these adjustment mechanisms (Hayek, 1949). In so doing, it limits the ability of the economy to respond to variations in supply and demand. The causes are so numerous and unpredictable that they cannot be anticipated. They 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; in the long run by technological changes which 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 employment obligations in general, and that these 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, and 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 1930's are outdated and, in some versions, irrelevant (Weil, 2014).

Forms of Work Regulation

The image of work regulation which underlies this argument is, however, derived from the administrative system characteristic of the United States, and that system is far from universal. An alternative administrative approach – and one which is a good deal more flexible – is found in France, most of Southern Europe and Latin America. The contrast offers, I believe, 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, what is termed in the shorthand vocabulary used by the International Labour Organization, a specialized, sanctioning system 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, OSHA, ERISA, several agencies which deal with immigration, the NLRB, the Federal Mediation Service, 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 a prison sentence. The penalty basically discharges the obligation of the enterprise. The penalty 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 possibly increasing prison sentences) 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; Piore and Schrank, 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 to do so. Toward that end, the inspector is empowered to develop a plan which 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 range of the 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 which brings about compliance gradually over time further expands their effective powers and discretion. In sum, the ability of 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 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 which actually address the problem at its root. In this way, it encourages the 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 rather than 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. Our own 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 which have been studied in the academic literature range from social workers to classroom teachers to 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 in all times and 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 over time, they develop a common code of behavior. The agents come to judge each other by the degree to which the 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 which governs their decisions is something like a language – a metaphor to which we will return below – and like a language it evolves in 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, informally through interactions on the job

or in relating war stories as they socialize with each other in breaks in the work routine or 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 which 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 crime? And if so what kinds of crime? Or is it 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 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 of those teenagers subjected to continual police "stop and frisks"?

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 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 socio-economic 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 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 which a strict enforcement of health and safety regulations or of wages and hours laws might imply.

But while street-level bureaucracies do not lend themselves to either hierarchical control or to management through simulated market incentives, the social environment which 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 which 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 vs. 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 which management controls is that of how self-contained the organization is, how open to outside influences and values, how dependent upon the judgment of the colleagues the agents actually are relative to other groups in the 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. These insulate military personnel from outside contacts which 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 which line officers receive from their colleagues versus that offered by their supervisors in dangerous situations is also an important variable 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.

But in many ways, the most interesting way in which management can exert influence over the decisions of street-level 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 not from the studies we have been conducting in work regulation but from a series of very different 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 so 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) 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 nobody knew exactly what they were 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 we likened in the study to an ongoing conversation, a conversation among the disparate engineers and managers who ultimately had to collaborate to produce the new product, and 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, tolerate, and ultimately appreciate their differences. In the second phase, they used the new language to discuss, play around with if you will, 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 the radical uncertainty involved in the creation of a totally new product was handled.

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 which become too antagonistic, introduce new guests to conversations which 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 which we are in the process of conducting now. 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 range 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 PM has very 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 which emerged in our case studies in design and product development (Fuchs, 2010).

The process begins with an often vague idea of a new technology—usually 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 PM then seeks to identify industries and areas of science and technology which might contribute in one way or another to the development of the idea, very often finding people who are strangers to each other and 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 first where

these people have developed a common language, and then have worked together to the point where one can identify specific technological issues which must be addressed does the PM formulate a set of research tasks and issue RFP's. Most notably, at DARPA the discussions surrounding the project continue even as specific research is taking place. The agency as a whole, and the PMs 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” (Schon, 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 then 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 PM at DARPA: A host at a cocktail party. With the singular exception 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 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 which 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 PM is even stronger. This is especially true in the current moment where 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, albeit 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 which management can organize and direct by playing the host to 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 which could inform the discussion.

It is admittedly hard to imagine the U.S. adopting the Franco-Latin model in 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 variety of 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 range from public prosecutors' offices at both the state and the national levels (Misner 1996; Chattin, 1996) to the forest service (USDA Forest Service, 2002) to drug and medical device regulation (Carpenter 2010) and to energy.

Paradoxically, the regulatory domain that in the U.S. is closest to work regulation is finance. Here too regulatory authority is dispersed among numerous federal organizations and in many of 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 1930's 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 interpretive conversation, that resonates throughout the sector and the many agencies which

impinge upon it about 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). Allan Greenspan as Chairman 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 the society. But the point here is less the particular failings 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.

Let me conclude by emphasizing this last point. Most of you here today are economists or students of economics, and I know that I have taken you very far from the territory in which you are comfortable. Why have I done so? 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, the worst industrial accident in history: Over 1,000 workers died in a factory producing goods for the U.S. market commissioned and later sold under U.S. brand name firms competing in market conditions created by the abrupt end of the Multi-Fiber Agreement, an end that the U.S. promoted as part of the policy of globalization designed and supported with the backing of virtually the whole of the economics profession. The building collapse was preceded by a factory fire that was virtually a replica of the New York City Triangle Shirtwaist fire 100 years earlier, which we believed had taught the lessons of the dangers of unregulated work in the garment industry and how to prevent them (Bhasin, 2014). In the U.S. 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 which 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, losing 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 which 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 how knowledge develops and evolves in an uncertain world. And I have tried here to point to where in other social sciences those understandings might come from and how they might be applied to the formulation of public policy. I believe that that is the task which we as economists face today. . The basic lesson which 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 and overcome some of the limits of a market economy.

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