

**Rethinking the Street-level Bureaucrat: Tacit and Deliberate
Ways Organizations Can Learn**

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1. From Labor Markets to Regulation to the Organizational Dilemma of the Modern Administrative State¹.

Michael Piore's abiding interest in the functioning of labor markets has gone hand in hand with interest in their regulation. Indeed, it is only a slight exaggeration to say that his deepest concern has been the design of regulation that reconciles the protection of workers with the requirements of economic efficiency, and that curiosity about labor market organization is an outgrowth of the conviction that improved understanding of those markets under changing circumstances is indispensable to improved design. But as the New Deal workplace regulatory regime of collective bargaining manifestly failed for many reasons from the 1980s on, if not before, to keep pace with changes in the organization of the economy, and episodic efforts at statutory regulation produced a hodgepodge of partial, disjoint protections rather than a comprehensive alternative, this interest in effective and decent regulation led Piore to shift emphasis from inquiry into changes in the labor market to inquiry into the forms of regulation that can keep pace with rapid labor-market change. The search for a resiliently adaptive method of regulation led in turn to the labor inspectorates in Latin countries such as France, Spain and the Dominican Republic, where officials with broad responsibility for workplace conditions ranging from health and safety to wages and hours and conflict resolution effectively monitor workplace conditions in diverse settings in their respective countries, limiting egregious violations of the law and, perhaps in the long run more importantly helping firms reorganize so that compliance is economically feasible.

As Piore himself quickly realized the success of these inspectorates—applying and elaborating rules pertaining to numerous domains, in diverse and changing settings, and supplying services to support compliance—posed fundamental organizational questions about service provision and rule making generally. Inspectors, after all, like police officers on the beat, social welfare workers determining eligibility for benefits or classroom teachers are conventionally understood to be applying rules or carrying out instructions that have been determined by their superiors, typically with the direction of outside oversight authorities. The police enforce the law; social workers determine eligibility

¹ This paper draws extensively on "Individualized Service Provision in the New Welfare State," a more comprehensive discussion of the organization, origins and difficulties of the Finnish special education, co-authored with AnnaLee Saxenian, Reijo Miettinen, Peer Hull Kristensen, and Jarkko Hautamäki for Sitra, Helsinki, October, 2010.

according to criteria set out in agency manuals and guidelines; teachers follow a curriculum established by the state and school district, using the textbooks and other materials provided by these authorities. Hewing to these rules makes their actions predictable, and so fair and accountable; by focusing attention on essentials it also makes official action effective. The conventional understanding recognizes that there will always be borderline cases and gaps in the rules, and therefore that the individual police officer or teacher will sometimes have to exercise discretion, informed by experience and professionalism, in choosing between two equally defensible course of action. But the idea that low-level officials may range widely, at will, within broad domains—that teachers will decide day-by-day or even month by month what problems in the school need attention, and how to address them—is from this point of view alien and disturbing. By what authority do they reorder priorities? And even recognizing the value of their knowledge of local circumstance, why should we think this sufficient to guarantee effective choices? Yet this is, broadly speaking, the kind of fluid, discretionary and effective intervention that apparently accounts for the superior performance of the Latin labor inspectorates. How do they do it?

To explain this surprising success Piore, in collaborative work with Andrew Schrank, repurposes the idea of street-level bureaucrat. As introduced by Lipsky (Lipsky, 1983), and still generally understood, the concept of the street-level bureaucrat heightened the tension between rule-following and discretion inherent in the conventional understanding of official action into an inevitable and severely limiting constraint on administrative effectiveness and accountability. Street-level bureaucrats—police officers, teachers, social welfare workers and so on—were defined as front-line officials facing decisions of such irreducible complexity so far from removed from supervision that they routinely exercised discretion in ways that can not be effectively reviewed. Adding new rules to cabin the discretion only increases rule conflicts, and thus opens new possibilities for discretionary choices in their resolution. By this ongoing exercise of discretion street-level bureaucrats upend the traditional hierarch: deciding as they see fit, they, not the topmost authorities, determine the de facto policies of their agencies. Except in egregious cases bias and mistake will likely pass unnoticed. So will the discovery of organizational problems, and innovations that might correct them. When bureaucracies must depend on street-level bureaucrats they cannot adapt and learn; and hence they are, in pure form, no model for the Latin labor inspectorates.

But carefully reviewing the literature on organizations that came be called street-level bureaucracies Piore noted that within any class of the them—police departments for example—there was often systematic variation across agencies at any one moment, and systematic change within particular agencies in time. This suggested that an agency has a distinct ethos or culture; that the culture limits discretion in characteristic ways (otherwise organizational behavior would

vary randomly, or in response to the patter of ideology or private interests of officials); and that under favorable conditions the culture can co-evolve with decision-making practice so that both decisions and the standards for evaluating decisions improve in the sense of fitting better with the demands placed on the organization. More precisely Piore concluded that in at least some settings:

[T]he decisions [by street level bureaucrats] actually seem to be made within the framework of a set of tacit rules and procedures against which it is possible, at least in principle, to gauge the idiosyncratic component or the narrowly self-interested calculation of particular agents. These rules are embedded in the organizational culture; they evolve as that culture evolves and are passed on from one generation of agents to the next through the process of socialization that occurs when new recruits enter the service. They are reinforced on the job as the agents interact with each other, reviewing and discussing the disposition of particular cases in the formal and informal interactions that occur on the job. They evolve with the situations the agents encounter and are required to address, and they change with alterations in the environment and as agents discuss and evaluate those situations with their colleagues and superiors. (Piore, 2011, pp. 150-1)

When this co-evolution occurs street-level bureaucrats form a new type of organization that Piore, to emphasize the cultural, collective nature of decision-making, calls a street-level *bureaucracy*.

The possibility of the formation of such institutions is itself an important qualification to the literature on street-level bureaucrats. It seems plausible as an account of the otherwise baffling adaptive capacities of the Latin labor inspectorates, even if Piore and Schrank do not trace development of cultural norms in the inspectorates they study in sufficient detail to buttress the claim of a co-evolution of decision-making practices and standards for evaluating their legitimacy.

Nonetheless, and assuming that the requisite detail could be provided for at least these cases, the emphasis in the concept of street-level bureaucracy on the tacit operation of norms and the guiding role of culture seem misleadingly incomplete as a general explanation for the kinds of flexible, adaptive service providers and rule making agencies that is it intended to cover. It is possible to imagine mechanisms of socialization and mimesis by which norms are tacitly tested by experience, changed and diffused. But it is at least as possible to point to mechanisms of norm revision that involve explicit challenge, discussion and judgment. Similarly with the emphasis on culture, and the corresponding reluctance to contemplate a role for formal institutions. Bordieu, for one, has

provided a compelling account of culture (or habitus as he calls it) that has precisely the formative yet absorptive character—shaping behavior while accommodating change in it—which Piore ascribes to it. But of course there are a myriad of formal institutions ranging from courts to administrative review boards or the periodic meetings of oversight committees that are formally changed with policing behavior in a way that can create precedents for changing it. Why, as a conceptual matter, we might wonder, will organizations aware of the need to increase their adaptability not come on the expedient of creating a formal procedure for evaluating the appropriateness of existing routines?

One possible motive for the conceptual limitation to the tacit and cultural or informal is explanatory parsimony—the reasonable aim of rearranging the available conceptual furniture only so much as required to explain the circumstances under scrutiny, and no more.² Bureaucracies are organizations in which inferiors execute the instructions of superiors (and each inferior has one and only one superior). An organization that authorizes and encourages front-line decision makers to question and revise rules in the act of applying them, and creates formal procedures to decide whether to generalize revisions is, organizationally, something else again. Such an organization would not at first glance resemble the street-level bureaucracies Piore describes, which do retain many of the outward features of traditional bureaucracies. Moreover, an organization of this kind would transform front-line discretion from an obstacle to an instrument of change. The idea of street-level bureaucracy, with its emphasis on culture as a tacit mechanism for disciplining and redirecting discretion can (just barely) be accommodated as a special case within the broad understanding of the limits of hierarchy embodied in the street-level bureaucrat; the prospect of an institution that does the same things explicitly and formally, through novel forms of cooperation between the higher reaches and lower levels of the organization, requires more extensive conceptual renovation. It raises the possibility that there is a solution to the problem of street-level bureaucracy that does not involve bureaucracy at all.

But the fact that the Latin labor inspectorates nestle snugly in the concept of street-level bureaucracy, and that this idea in turn can meld with and extend the concept of street-level bureaucrats by itself says nothing about the existence of formal institutions for making front-line imitative and autonomy a motor for rather than an barrier to organizational learning. In what follows I will argue that such a non-bureaucratic organizational form does indeed exist, and suggest that it plays a more prominent role in successful reorganizations of public sector institutions than much current discussion recognizes.

² Another, and perhaps more important is Piore's engagement with the idea of community, and especially language communities, as an alternative to market regulation, about which more below.

The focal case is the Finnish school system, and especially the role of special education teachers: The success of Finnish schools in enabling students from all socio-economic backgrounds and with a wide variety of learning problems to attain high levels of achievement has been repeatedly documented. Common explanations for this success stress the role of culture—especially the culture of the teaching profession—and overlook, as we will see, an ensemble of formal mechanisms, at many levels and functional departments of the school system, for assessing the utility of current practice, and when necessary revising it. Moreover, Finland’s Nordic neighbor, Denmark, shares many of the same cultural traits, and tried, but failed, to achieve the same educational outcomes by means that can reasonably be described as a deliberate effort to create a street-level bureaucracy. It provides a useful point of references for analysis of the conditions under which such efforts are likely to succeed. Although in presenting the formal alternative to street-level bureaucracies the focus will thus be on cases of professional development and transformation that overlap in many ways with the ones that Piore discusses, making it easier to see which differences count, I will call attention to developmental paths that reach the same result from a quite different starting point: the reconstruction of badly broken bureaucracies.

What follows can be taken as a stand-alone account of a novel and adaptive organizational form. But it is indented primarily as a corrective to what I see as the undue emphasis on the tacit and the cultural in Piore’s important effort to enlarge our understanding of institutional possibility. It is in the nature of correctives to be themselves unbalanced and one-sided, mirroring the distortions they would remedy. This one is no different. In underscoring the role of explicit, institutionalized norm revision, I am doubtless underplaying the role of culture in the operation and lived experience of Finnish special education teachers, many of whom (but not, or not so commonly the professors who train them, the educational psychologists with whom they co-design the diagnostic tests they use, or the members of the school oversight bodies that regularly review their strategies for supporting individual students) would easily recognize key elements of the way they work in the account of street-level bureaucracy. Conversely, Piore’s own current work on street-level bureaucracy recognizes the need to incorporate formal mechanisms for explicit learning. The two accounts are thus more self-consciously partial and deliberately complementary than suggested at the outset; and I will have something to say about this complementarity below, but with no pretense to offering a theory of organized learning that fully integrates tacit and explicit adjustment and informal and formal revision of norms.³

³ This mutuality is not accidental. This essay just rephrases a discussion that Piore, Schrank and I have been having for several years, and plan to continue in joint work. Because of inveterate

Section 2 briefly sets out the general conditions under which bureaucracy is an effective form of organization; presents a stylized account of an organizational form that uses the active collaboration of front-line workers and other mechanisms for explicit learning to adapt under circumstances when bureaucracy cannot; and indicates two paths along which such organizations can develop. Section 3 uses a case study of the Finnish school system to exemplify the alternative principles of organization, presents quasi-experimental evidence that it works because of the organizational innovations under discussion, and contrasts Finnish educational success with Danish failure to achieve the same results by relying on a strategy of cultural and professional change rather than explicit, institutional reform. Section 4 returns to the complementarity between this account and Piore's.

2. The Organizational Dilemma and an Experimentalist Solution

The Dilemma

The effectiveness of bureaucracy depends on the separation of conception and execution, or, in a different parlance, between principals (who set goals) and agents (who execute them).⁴ A small group at the apex of the hierarchy fixes purposes and designs a product or service that serves them. The execution of the design is then decomposed into a myriad of routine operations carried out by relatively unskilled workers, made adept by repetition, or by machines and computers. The workability of this separation of conception and execution depends in turn on the stability of the hierarchy's external environment, and the requirements that these impose on the organization. If change outpaces the capacity of the organization to redirect its goals, and write and implement a cascade of ever more precise instructions for executing them, costs sunk in establishing the current version of the hierarchy can not be recouped, and ad hoc efforts to compensate for the failure of systematic adjustment soon produce a patchwork of accommodations that slowly immobilize decision making, further diminishing the capacity of adaptation.

character defects I have given myself the better part of the argument. But as Piore well knows, it is the conversation that counts.

⁴ Usage is a little slippery here. The principal of a firm can be the shareholders, who (in theory) own it, or the senior managers (who, under normal conditions, actually direct it). The principal of a government agency can be the electorate, embodied in the legislature and its committees, or the senior officials who in fact determine the agencies priorities and practices. And of course there can be nested relations, where the same person is the agent to a superior and the principal to an inferior. Unless otherwise indicated these distinctions and relations are irrelevant for present purposes, and principals will simply refer to those charged with conception, agents to those charged with the execution of tasks.

For much of the 20th century conditions were stable enough to encourage the construction of large bureaucracies in the public and private sectors, to the point that hierarchy came to be understood as the uniquely effective form of modern organization. Even in this period, however, it was well understood that hierarchical rules could not anticipate all contingencies, and that the informal initiative—discretion—of subordinates was indispensable to organizational success. But it was widely and plausibly assumed that this discretion could be managed in the interests of the organization. Thus for Chester Barnard, a pioneer in the study of the managerial studies, the chief function of the executive was precisely to induce informal support for official purposes (Barnard, 1938) through open and direct communication and other means.

Beginning in the 1970s, for reasons that differ in the public and private sectors, and are not deeply understood in either, conditions became markedly less stable, and large bureaucracies came under strain. In the private sector the vertically integrated firm, in which all key components and the final product were designed and produced within a single, encompassing hierarchy, has disintegrated. Components, products (and often the devices or applications whose use these product platforms facilitate) are today typically co-developed by independent firms, each adjusting its design aspirations to the intent and capacities of the others. Such constellations are often referred to as production ecologies to underscore the symbiotic relations among their constituents. Within the constituent units the hierarchical organization of production, epitomized in the assembly-line workers whose motions are wholly determined by the rhythms of machines, has been largely replaced by the Toyota production system, in which front-line workers have substantial responsibility for detecting, investigating the underlying or root causes of, and correcting malfunctions in the manufacturing process or in the design of the product—a clear recognition of the need, under fluid conditions, to authorize ongoing review of top-down conceptualization of organization in light of the experience of implementing it. Put another way, as its hierarchies came under the stress, the private sector came to acknowledge in practice that under current conditions principles (responsible for fixing ends or goals) can not have the kind of panoramic information necessary to give reliable instructions to their agents (responsible for choosing the means to realize them), and to explore new forms of collaboration between them.

In the public sector in contrast, the distress of bureaucracy came to be understood not as a change in the environment requiring innovation in organizational forms, but rather as a failure of governance allowing subordinate agents to usurp power. The unchecked discretion of street-level bureaucrats exemplifies the result. The reaction, accordingly, has been to try to clarify and reassert the distinction between principals and agents, and to use the market, or market-based mechanisms as instruments of governance for making this distinction in roles workable.

One such response is privatization: contracting out public functions like education or waste management to private firms. Another is an ensemble of reforms, often called new public management or management by results, in which public goals are precisely defined, quantitative goals are established, and officials in effect enter into performance contracts with their superiors, according to which success in meeting the goals is rewarded and failure punished—as though the officials and their departments were independent contractors supplying the public sector. Both have had only limited success: Apart from certain sub-sectors within transportation. Incarceration and waste disposal, where levels of service are relatively easy to define (or, as in the case of incarceration, the public tolerates lax provision), private firms have had difficulty turning a profit providing core government functions such as education to broad and diverse populations. New public management too has had difficulties with goal setting. The purposes of government agencies are typically broad and complex, so the simplification and narrowing of goals that allows for quantification soon leads to their proliferation: The specification of one purpose calls attention to a related but previously unspecified one. As goals proliferate managers can plausibly argue that all cannot be achieved at once, and this invites the exercise discretion in determining which to pursue. Many problems, moreover, can only be effectively addressed by coordinated interventions in diverse domains. Consider child abuse, which has an etiology of its own, but is often aggravated by mental health problems and substance abuse. Efforts to stabilize a shattered family are likely to fail unless all these problems, and many others as well, are addressed together; but the difficulties of devising an incentive system to induce the kind of broad and flexible approach necessary are formidable. Despite these familiar limitations, discussion of privatization and the return to market mechanisms still dominates much of the discourse of reform of the public sector.

An Alternative to Bureaucracy

But as often the case the dominant discourse is far from the whole story. In the US and the EU, in domains as diverse as education, child welfare, or the regulation of food safety, there is evidence of organizational innovation that, like the changes in the private sector (but infrequently directly influenced by them), responds to the strains of bureaucracy by giving front-line workers new responsibilities that blur the distinction between principals and agents,

Instead of trying to limit front-line discretion as the conventional view of bureaucracy would suggest, public-sector actors in these innovative settings openly authorize it, actually increasing the autonomy accorded front-line workers: The case worker for, example, is tasked not with determining which clients are eligible for which programs, but devising, in consultation with the client and a team of expert service providers, a plan that brings the relevant resources to

bear on the client's problems. As a condition of this autonomy, however, the front-line worker (or, increasingly, the multi-professional, front-line team) must provide a detailed report on the client's progress under the plan, and evaluate progress by agreed metrics. The plan and monitoring reports are in turn reviewed by a group of the front-line workers' (or team's) peers in the light of the experience in comparable situations. (Noonan et. al., 2009)

It is peer review of this kind that creates a mechanism for accountability. The front-line worker is accountable when, in the judgment of her peers, she can justify her actions as in the best interest of the client, given the overarching purposes of the public organization providing the service, and given the range of results obtainable in similar cases. If doing this requires deviation from the rules, then the rules need to be re-examined in the light of the higher purposes they are intended to serve. This dynamic or forward looking accountability contrasts with conventional forms, in which agents are accountable to principles precisely to the extent that they comply with the rules established by the latter.

This peer review also creates a mechanism for institutional learning. It allows local error to be identified and corrected, dead ends in policy development to be detected and promising successes to be generalized or subjected to more intense scrutiny to verify initial results. Put another way, peer review as part of dynamic accountability affords the case worker and his team an opportunity to improve their decision making, while allowing the institution as a whole to reconsider current rules and routines in light of their successes and failures. Think of this as learning by monitoring. Because such organizations share with philosophical pragmatism the assumption that routines and even guiding assumptions will be in need of correction, and put that philosophy into practice by developing routines for regularly exploring the advisability of doing so, they are called pragmatist or experimentalist. Experimentalist institutions in effect officialize the topsy-turvy world of the street-level bureaucrat, but in a way that makes it accountable and capable of learning from its own diverse experience.

Development Paths

There are, very broadly speaking, at least two paths in the advanced countries leading to the formation of such experimentalist organizations. The first might be called the direct or natural path because it develops the professional tradition informing clinical social work, education and health care that emerged "naturally" in Europe and the US in the early 20th century. It takes professionals as independent flexible problem solvers and enhances their capacity to address a widening range of (more and more individual problems) by decentralizing authority within the large-scale organizations that typically employ them to regional and local levels, increasing the training and support available to individual practitioners, encouraging them to work in interdisciplinary teams, and

introducing elements of peer review and dynamic accountability. Cumulatively these changes ultimately transform traditional professional identity, and especially the understanding of professional accountability, which is highly deferential to individual autonomy, only intervening in cases of gross, manifestly “unprofessional” misconduct. So the direct path is direct and natural only in the sense that it involves no abrupt and highly visible break with traditional and apparently “natural” forms of association, but not in sense of leaving these entities unperturbed, in some imaginary original state.

As we will see in more detail in a moment, this is the path taken in the Finnish school system, particularly in special education. It is also the path taken in Danish labor market policy—especially continuing education at the heart of activation and flexicurity. (Cohen and Sabel, 2010) Given its association with these salient cases we will also refer to this path as the Nordic way. But keep in mind that in many cases Nordic societies started down this path to reform only to lose their way, not least because they were too dependent on or perhaps deferential to the existing corps of professionals. For example, in the case of Danish schools, which we will consider in some detail, efforts to regenerate teaching focused on encouragement of new and more intense forms of cooperation among teachers, rather than on peer review and other elements of dynamic accountability—with unsatisfactory results. Conversely, there are many examples of the gradual transformation of professions in an experimentalist direction outside of Scandinavia—in the health care sectors of the US and Great Britain, for example. So there are no uniquely Nordic prerequisites to this path to development.

The second or roundabout route is via the reconstruction of broken public bureaucracies and it is characteristic of the US. Large, highly formalized bureaucracies emerged there in public administration starting the 1960s, largely in response to the fear of front-line discretion mentioned above: The Left feared street-level bureaucrats, such as police officers on the beat, would be unsympathetic to the poor and persons of color. The Right feared that social welfare workers might be unduly generous to claimants. Both could agree on the need for rules to restrict discretion, with the results noted. (Titmuss, 1971) After years of crisis public institutions as diverse as schools and child welfare agencies came, independently upon the solution of enlarging the autonomy of front-line workers, but obligate them to explain their use of discretion, with peer evaluation of their results. As the enlargement of autonomy is often perceived as a (re-) professionalization of front-line service occupations, this “top-down,” deliberate reform generates a “bottom-up,” cultural complement, just as the Nordic path introduces elements of “top-down,” deliberate review into traditional “bottom-up”

professional culture.⁵ There are, moreover, strong affinities between this path to experimentalist institutions and the Toyota production system. As the Toyota system has now diffused to countries around the world (Womack, 2010), there is nothing peculiarly American about the roundabout, US path, just as there is nothing uniquely Nordic in the Nordic way.

To judge by experience so far, neither path is superior. Their advantages and disadvantages mirror each other. Thus the advantage of the natural path is precisely that it is natural. Existing professions and institutions grow almost effortlessly into new roles and responsibilities. Change is organic, incremental, and all but invisible. Deep assumptions can change, or at least relax their grip on practice, without contentious, potentially paralyzing debate about first principles. A system capable of collaborative learning and cooperative provision of specialized services emerges, but few of the actors have a sense that they are acting in a system—and still less of design principles that (have come to) shape their interactions.

But this same natural, almost invisible process of change can become an obstacle to continuing development when several existing professional practices need to be reconsidered and revised jointly to reach emergent problems. In that case the informality of learning and self-revision that made adjustment seem automatic, and the corresponding inattention to the design of the system as a whole can be a barrier to more deliberate and analytic reconsideration of strategy and organization. Indeed the very effort to organize such systematic discussion can seem, given the continuing emphasis on the primacy of individual self direction and responsibility, as an assault on professional dignity and autonomy. Such strains are apparent in the halting efforts of school reform in Denmark, and they are coming to light in current discussion for the need for more systematization in the interests of more reliable and effective customization of services in Finnish special education as well.

The strengths and weakness of the roundabout path are the reverse of these. Change is hard, nearly impossible it seems, to initiate. It takes a crisis, often decades of crisis, to force serious reconsideration of broken bureaucracies. Normally incumbents are sheltered from the need to change by the familiar logic of collective action: The costs of institutional failure are diffused over large numbers of supposed beneficiaries, none of whom has an incentive to fight for change, while the advantages of the status quo confers large rewards on the small group of incumbents, who are therefore motivated to defend their privileges against reform. (Olson, 1974) It is only when the costs of failure are broadly seen

⁵ For historical reasons “professional” remains the omnibus term for a decision maker authorized to exercise independent judgment—rather than following a rule or executing a command—in addressing technically and morally complex problems.

as unacceptable—when parents see failed schools as crippling their children—that this logic loses its grip. But once change is seen as necessary, the only means by which it is possible involves identification and remediation of successive constraints—a continuing process of collective enquiry into the operation of the institution or system in relation to its goals. This process too is incremental; but it is, unlike the natural development of professional competence, not tacit or nearly so. On the contrary, it relies on the ability of teams at all levels in the organization to make explicit the limitations of their current activities and ways to redirect both their efforts and those of the institution. Introduction of methods of this type, diffusing rapidly in the New York City school and other US school systems could, we will see, could help address some of the problems emerging along the Nordic path to customized service provision in Finland.

3. How Experimentalist Organization Works: The Finnish Special Education System

In a world that increasingly sees effective education as an indispensable form of both a collective and individual insurance against economic instability—the core of a welfare state based less on redistributive transfers and more on provision of services to individuals that help them develop the flexible capacity to respond to labor market and other risks they face—the success of the Finnish school system naturally draws attention. Finnish 15-year olds regularly outperform their peers in other advanced countries in the quite demanding PISA test of reading, mathematics, problem solving and scientific knowledge. The distribution of these results strongly suggests that schooling in Finland is contributing greatly to social solidarity: The variance or divergence from the mean, of individual students' results is smaller in Finland than in any other country, as is the variance of the performance between individual schools. While each quintile in the Finnish distribution of science scores (the lowest scoring 20 percent of the test takers, the next highest 20 percent, and so on) outscores the corresponding quintile in other countries, it is the bottom quintile of Finnish students who outperform the most, and thereby raises the mean to the top of the international league tables. As might be expected from this outcome, the influence of the parents' social and economic status (SES) of their test performance of their children, while still detectable in Finland, is more attenuated there than anywhere else. The Finnish school system is thus an institution for disrupting the transmission of inequality in life chances from one generation to the next. By the same token (and given that a score in the highest three of the six categories on the PISA science scale, where most Finnish students place, arguably demonstrates capacity for life-long learning) the school system provides an essential capacitating service that reduces the risk of inequality and exclusion within each generational cohort. Understanding how the Finnish school system produces these results is thus likely to shed significant light on the encompassing question of how front-line work can be systematically organized to produce consistently superior results

across a wide variety of settings, the supposed limits of street-level bureaucracy notwithstanding.

But it is precisely here, in explaining how the Finnish school system actually works, that discussion and analysis falter. Current explanations of the PISA success focus almost exclusively on circumstances outside the school—on inputs to schooling—and more specifically on various cultural features of Finnish society rather than the organization of schools and classrooms.⁶ Perhaps the most prominent of these cultural explanations points to the contribution of a homogeneous society that values education (and indeed long took the imparting of literacy to be a family, not a social responsibility), and reading in particular (as evidenced in strikingly high rates of library utilization by students and citizens). Another variant focuses on the professionalism, and hence the feasibility of delegating substantial responsibility to highly competent teachers, selected by rigorous competition, thoroughly trained in substantive disciplines and pedagogy in demanding university courses, and rewarded for their accomplishments by high social prestige (including attractiveness as marriage partners) and professional autonomy in the classroom (but not especially high pay, as judged by OECD averages). Relatedly, trust between national and local actors is supposed to make it possible to limit the national curriculum to essentials, leaving adjustment to local needs to local discretion, and to explain the absence of testing, especially high stakes testing (where test results have important consequences for individual pupils, teachers or schools) and the corresponding reliance on the judgment of teachers to guide pedagogy. A national culture of equity and equality is often said to be the foundation of the other forms of trust.

There is no doubt something to each of these explanations—how could it be proved, for instance, that the Finnish Lutheran esteem for reading has no influence on schooling?—and we will see that teacher training does play an important part in school success, although in combination with distinct forms of classroom collaboration. It is moreover entirely understandable, in the light of the manifold and manifest failures in recent decades of large-scale organizations—public school systems very prominently among them—and the resulting skepticism about their capacity to carry out complex and rapidly shifting tasks, to assume that the success of Finnish education must reflect features of the society in which it is embedded rather than of the organization of the schools themselves. But there are six circumstances that strongly suggest that none of these explanations alone will bear the weight that is placed upon it in current

⁶ An important but limited exception is the brief account of the school system currently posted by the Finnish Ministry of Education, which points in the direction of the analysis pursued below. See <http://www.minedu.fi/OPM/Koulutus/artikkelit/pisa-tutkimus/index.html?lang=en>, visited May 12, 2010.

discussion, and that all together are partial or limited in the sense that they simply do not address formal school practices—together, a distinctive, experimentalist form of organization—evidently crucial to explaining educational success.

First, Finland's extraordinary educational performance is a relatively recent development of the last decades, not an abiding or traditional feature of the society. Until the 1970s Finland, like most other Northern European societies, had a two-track system of education, with one track leading to the university and the professions and the other to vocational training and skilled blue-collar work. In the 1970s Finland, in response to long-standing egalitarian complaints against the rigid and early tracking of students, and again like many other societies in its neighborhood, created comprehensive schools in which students of differing aptitude were taught together in the same building and often in the same classes. Before these reforms, which included transferring teaching education from specialized seminaries to the universities, the scores of Finnish students (apart from reading) were mediocre in international comparisons, and rates of grade repetition were high—a characteristic indication of a low-quality school system, as it is typically much more effective for students and schools to detect and correct individual learning problems as they occur than to compel repetition of a whole grade on the off chance that a student will overcome obstacles the second time that went unnoticed the first. After the reforms repetition rates went down, even though teaching to classes of mixed aptitude is usually considered more difficult than teaching to homogenous groups, and performance in international comparisons went up. Thus no feature of Finnish culture—neither love of learning nor respect for teachers—can explain current performance.

Second, even within Finland's immediate Nordic neighborhood there are countries with relatively homogeneous populations, egalitarian traditions, commitments to education for all (as measured by expenditures per student) at least equal to Finland's, and similar combinations of national curricula and deep respect for school autonomy that do not do well on the PISA tests. Denmark is a striking example. It spends more per pupil than any other country in the OECD but the US, and shifted to comprehensive schools at about the same time and for the same reasons as Finland. But whereas the PISA results of 2000 and the following years were a pleasant surprise for the Finns, they were an unpleasant one for the Danes: Despite a demonstrated willingness to expend resources and respect for schools and teachers as keepers of the living word of the nation's culture, Denmark usually places near Germany, slightly above the OECD average. To put the difference in educational performance with Finland more starkly: Seven percent of Finnish 15-year olds scored in the lowest PISA reading category in 2003—a level indicating functional illiteracy—while 17.2 percent of Danish 15-year olds scored in the bottom category. (Hattie 2003) Plainly, egalitarian commitments, even in combination with marked attention to schooling,

are not enough to ensure high performance.

The Danish result is especially interesting because the country is generally recognized as a successful pioneer of comprehensive active labor market policies that create life-long learning opportunities for those who have already entered the labor market, and especially for those who, having done poorly at school, entered the labor market with few skills. Finland does much less well in this domain; and recent efforts to address the problem are judged unpromising. One implication of the contrast is that national traditions of solidarity do not themselves yield successful institutions of solidarity, and that the decisive conditions for success are not to be sought at the level of national cultural endowments, rather than in specific domains of activity and policy.

The third circumstance concerns testing. While the Finnish system does not use high stakes tests until the transition from general secondary to tertiary (university) schooling, it is simply wrong to conclude from this, as some observers do, that teachers rely almost exclusively on their own evaluations of student performance, to the near exclusion of standardized instruments for assessment. In fact, Finnish education relies on the information from diagnostic testing from the start, well before the beginning of formal instruction. At two-and-half Finnish children are tested for emergent cognitive problems, and by the time they reach pre-school, at age six, their teachers will be able to anticipate learning difficulties on the basis of a rich battery of further tests. Once formal schooling begins students are frequently tested—and recent legislation will make this continuous monitoring even more fine meshed.⁷ These tests, in addition to being low-stakes (with neither punishments nor rewards attached to outcomes) are also typically diagnostic and formative: their aim is not just, and usually not even primarily, to register failures in learning, but to indicate where, at what step in problem solving, a breakdown occurred, and thus to help suggest what might be done overcome it. These diagnostic tests are created and continuously refined by a battery of institutes specializing in cognitive development and related disciplines, as well as specialized textbook publishers, in close consultation with the classroom teachers who actually use the instruments they make. Thus Finnish teachers do indeed play a crucial role in student assessment, but they do so with the help of tests, and in collaboration with test makers, that has gone largely unremarked in the discussion of the school system.

The fourth circumstance likewise concerns an underexposed aspect of school activity: special education. Some 30 percent of Finnish comprehensive school

⁷ Formally the new school law entered into force on Jan. 1, 2011, but three sections, having to do with the rights of parents to participate in student welfare work and with confidentiality and data access have been applicable since August 1, 2010.

students receive special education services, by all accounts a much higher fraction of the school population than in other OECD countries, although precisely comparable data is hard to come by.⁸ More than two thirds of these students (22 of the 30 percent) receive short-term special-needs instruction, in standard classroom settings, with the aim of addressing particular learning problems and continuing with the normal course of study. The remainder has deeper and more pervasive cognitive or behavioral problems. They are diagnosed by a school psychologist as requiring more intensive and continuous attention and are often grouped for instruction in specialized classrooms. Special education teachers—certified teachers who must compete for the opportunity to complete rigorous, further courses on responding to a wide range of learning disorders—provide both kinds of services. The students who access short-term special instruction—each will typically receive several “courses” of such educational “therapy” in proceeding through comprehensive school—are of course the ones most likely to score in the lowest quintile of the distribution of PISA outcomes. As we have just seen, the outperformance of the lowest Finnish quintile in international comparison which contributes decisively to the overall result. So it follows that a significant part of the Finnish success in primary and secondary schooling is owed to special education teachers, who in turn rely on and are also active in collaborating in the creation of (diagnostic) test instruments.

Fifth, the provision of special education services of all kinds is carefully and regularly monitored in each school by a student welfare group (SWG). The SWG includes the school principal, the school psychologist (sometimes working for several schools and with several SWGs), the school nurse, special education teacher(s) and sometimes, as requested, a representative of the municipal social welfare administration. In the normal case, the SWG reviews the performance of each class (and sometimes each student) in the school at least once a year. This allows identification and tracking of students in need of remedial, part-time special education. When a student is identified as requiring full-time special education, the SWG checks that the individualized study plans—the Finnish acronym is HOJKS⁹—guiding the development of each pupil needs support are being followed to good effect, and if not, what corrections are necessary. It is the SWG, in close collaboration with classroom and special education teachers, which bundles services according to individual needs, including, where necessary, calls for services outside the school system itself: municipal social-

⁸ See European Agency for the Development in Special Needs education, <http://www.european-agency.org/country-information>.

⁹ Henkilökohtainen (personal) Opetuksen (teaching) Järjestämistä (organisation) Koskeva (regarding, concerning) Suunnitelma (plan)

welfare services, for example, or mental health services provided by a local teaching or psychiatric hospital.¹⁰

Sixth and finally, a National Board of Education (NBE), officially part of the Ministry of Education but with substantial autonomy, provides the school system as a whole with some capacity for self-reflection and correction. The NBE, in consultation with the relevant stakeholders, prepares the framework or core curriculum for public schools. It participates in an annual evaluation of the performance of a sample of 5 to 10 percent of the student population to monitor the extent of regional or social disparities and, if need be, prompt improvement in individual schools included in the sample. (Schools are never ranked.) Together with the Ministry of Education and other public agencies the NBE funds the co-development by classroom teachers and outside experts of diagnostic tools, and training for special education teachers in their use. It also funds in-service training of teachers, principals, and SWGs. On the basis of these continuing and rich interactions with all parts of the school system the NBE identifies shortcomings in the organization of the school system and suggests ways of addressing them (which are then formally presented by the Ministry of Education to parliament as draft revisions of education law). Put another way, the NBE is broadly responsible for guiding or steering the implementation of current reforms (within the limits afforded by school and municipal autonomy), and in light of the experience thus gained proposing the next round of improvements.

Overall then, there is strong circumstantial evidence that the success of the Finnish school system depends significantly on classroom, school, and school-system practices—collaboration between regular and special teachers, as well as between teachers and test makers; the review of service provision by the SWG; some monitoring of system-wide performance by the NBE—whatever the role (if any) of very broad societal inputs such as egalitarian values or love of learning or books. More precisely, the Finnish school success depends on purposeful, effective exercise of local discretion that systemically tailor pedagogy to the needs of individual students—a result that the notion of street-level bureaucrats precludes entirely and the idea of street-level bureaucracy contemplates as the outcome of tacit, cultural mechanisms.

In the terms introduced above the Finnish system is an experimentalist organization: The special education teachers are the front-line workers. They, in consultation with other relevant experts, make and periodically update individual education plans for each student with whom they work. Peer review is conducted by the SWG in each school. It aims to ensure that the plan is at least

¹⁰ To avoid misunderstanding at the outset: integration of services functions better within the school than between the school and the municipal social welfare administration. One aim of the reforms proposals to be discussed below is to improve this link. See *infra*.

as effective as the best of current experience suggests it can be, and to strategize about remedial measures if it is not.

The Finnish special education system does not, however, have well developed mechanisms for generalizing and exploring the organizational implications of the successes and failures of individual schools, although there are many informal means for doing so, particularly at the municipal level. One important consequence is that decision-making practices vary, sometimes widely, from municipality to municipality, typically for reasons unrelated to attempts to adjust to differences in local needs. Pupils in similar circumstances may therefore get be offered quite different special-education services; in some cases, intervention may come too late to be effective. In view of these problems, recent legislation requires further formalization of frameworks for decision-making and review. The framework education law of 2010 requires, however, that municipalities address these irregularities (principally by intervening earlier, and providing “intensified support” to pupils with difficulties before making decisions regarding full-time special education), and make a detailed report to parliament on progress in 2013. To the extent that the school system succeeds in meeting these new requirements (avoiding paper compliance that could undermine its current successes) it is likely to do so by developing the higher-level monitoring and information-exchange capacities that it currently lacks, and in that sense becoming more fully experimentalist.

Finland’s Present Compared with its Past: Some Quasi-Experimental Evidence that Experimentalist Organization Works

The single most compelling piece of evidence that the success of the Finnish school system in international comparison is due to institutionally coordinated front-line interventions, and especially (part-time) special education in the comprehensive schools, is the striking performance of the bottom quintile of the school population in the PISA exams. This group does so much better against its peer quintile in other countries than the higher scoring Finnish quintiles do against theirs that its achievement accounts for much of Finland’s overall high standing. And it is of course the lowest quintile that benefits most from the provision of part-time special education services.

Still, a more direct confirmation that the comprehensive school and special education account for the superior performance of the bottom quintile would be welcome. It might be, for example, that in a highly egalitarian society such as Finland good students are traditionally under a moral obligation to tutor struggling ones, or that traditional forms of group study have this effect—as they have been found to do among Asian-American students of college-level math. (Treisman, 1992) In that case the superior performance of the bottom group would owe more

to traditional practices of solidarity and their cultural foundations than to institutional innovations in schooling in recent decades.

The methodologically pristine way to ascertain the importance of comprehensive schools and special education to the Finnish outcome would be to establish a sample that mirrors the relevant features of an entry-level school cohort, and then randomly assign part of the sample—the control group—to a school setting with no part-time special education, and the rest—the treatment group—to a school setting providing such services in the “typical” form, duration and frequency. The differences in outcome, measured periodically, would then reflect only the influence of the “treatment”—here, pedagogy customized for students with learning problems by special-education teachers collaborating with classroom teachers, and subject to periodic peer review.

In recent research Moberg and Savolainen (2006) have designed an historical comparison that captures many of the advantages of a random assignment experiment. Their control group is a random sample of 9th grade pupils from four schools in the city of Jyväskylä in 1966—before the introduction of comprehensive schools and the wide diffusion of part-time special education. Moberg created the sample for his master’s thesis on reading comprehension and the speed of retrieval of written information. In 2005, Moberg and Savolainen used a random sample of 9th-grade Jyväskylä students from the same schools as a treatment group. Pupils with severe learning disabilities and non-native speakers—about 2 percent of the student population in both cases—were excluded from the study. The shift under the new school regime to customized pedagogy for students with less severe learning problems was conspicuous. Whereas 2 percent of the pupils in the 1966 sample received part-time special education services, 29 percent of the pupils in the 2005 group did.

To measure the contribution of the new school regime to pupils’ reading proficiency Moberg and Savolainen simply administered the 1966 tests for information retrieval and comprehension to the 2005 treatment group, in effect transporting them back in time for purposes of comparison with their untreated peers. The improvement in performance is striking. The mean score of the treatment group was sharply higher on both tests (by some 50 percent in comprehension and 30 percent in information retrieval). Expressed as effect sizes—roughly, the difference between the means of two groups adjusted for the variation within them—the changes are large (1.18 and 1, respectively) and statistically highly significant ($p < .001$) (p. 486). The variance within the treatment group was smaller than in the control—performance had become more homogeneous.

As Moberg and Savolainen emphasize, the crucial finding regards the distribution of these overall improvements in reading. It is the poorer performing students in the treatment group—the lower deciles in the 2005 sample—who improve the most relative to the 1966 control-group baseline. Figure 1 displays the difference in performance of each decile, expressed in terms of the distance above the 1966 mean (set at zero) obtained in 2005.

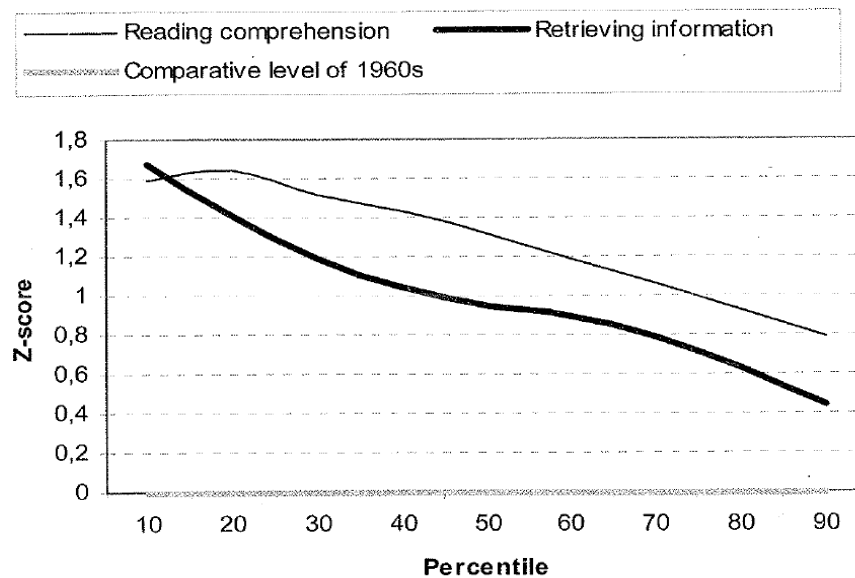


Fig. 1. The change in reading comprehension and speed of retrieving information from 1960s to 2005 across performance percentiles

These results—outperformance by low-deciles, reduction in variance, and underpopulation of the low-performance categories—reproduce the defining features of Finland’s showing on the PISA tests. Thus Moberg and Savolainen demonstrate that Finland’s relation to its own recent past is like its current relation to lower-performing school systems in other countries. What has changed in Finland—the treatment that explains the improvement in performance—is the introduction of specific practices that allow front-line workers—special education and classroom teachers—to devise and revise strategies for mitigating individual learning disorders in consultation with school leaders, and with the help of diagnostic instruments they co-develop.

A Failed Attempt to Build a Street-level Bureaucracy: Finland and Denmark Compared

Another way to underscore the importance of deliberate reform, and the creation of institutions for continuously reviewing and improving local interventions, is to compare Finnish experience with that of a similar country—Denmark—which

tried unsuccessfully to achieve similar results by encouraging “organic” development of local, professional communities as the principal means of adjusting to changed circumstance—a strategy of cultural change premised on the existence of and promising to lead to the renewal of just of the kind of professionalized hierarchy that Piore calls a street-level bureaucracy. The failures of the Danish school system are not of course a demonstration of development limits to street-level bureaucracy; but they do suggest that conditions for their development are more complex than an account focusing primarily on the unfolding of cultural standards might suggest.

As noted earlier the Nordic countries, and Denmark in particular, are equally committed to egalitarian values (with service-based welfare states and universal, not occupation-specific entitlements), at least as committed to funding high-quality public education, and have (by US standards) equally homogeneous populations. On closer scrutiny the similarities are even more extensive and striking. The other Nordic countries, and particularly Denmark, share with Finland a view of early childhood as a time of creative play and fantasy. For this and other reasons child-initiated activities, rather than structured learning, is the focus of pre-school and kindergarten, the start of primary public education is delayed until the age of 6 or 7. Consistent with this, schooling in all the Nordic countries tends to be child-centric: the pupil is seen as naturally curious and enquiring, and the teacher’s role is importantly to encourage and support these dispositions. All the Nordic countries have comprehensive schools, as in Finland, and none stream pupils in compulsory education; so the same children can typically attend school together as a class for 9 years.

The Danes, moreover, understood the challenges facing the traditional school system in the same terms as the Finns, and were as determined to solve them. In the 1950s the Danes were fully aware that the eventual transition to comprehensive schools would require differentiated pedagogy—teaching the same things differently to each student, according to need. A commission formed under the aegis of the Ministry of Education and including representatives of all the stakeholders in Danish education emphatically embraced both in an official report on curriculum planning in 1960 (*Det af Undervisningsministeriet under 1. September 1958 Nedsatte Læseplanudvalg*, 1960). Schools were in fact gradually integrated and tracking slowly eliminated, starting in the 1970s. A school reform law of 1993 finally ended tracking, made differentiated instruction a requirement, and obligated teachers to prepare individual study plans (elevplaner).

Yet despite these and other similarities the two systems perform very differently. In the PISA 2006 tests Finland was 1st in science, 2nd in reading and 2nd in math; Denmark ranked 24th, 19th, and 15th respectively.

The divergences have to do with the way the Danes undertook to reform the teaching profession so that it could provide differentiated education. Where the Finns integrated teaching training into the universities, so teachers were (after 5 years of education) fully accredited in their fields, and received carefully supervised clinical practice in teaching, the Danes kept teacher training in separate seminars, which attracted and attract mediocre students. Where the Finns created an elite corps of special education teachers (with an additional year of instruction and practice) within this highly trained group, the Danes allowed any qualified teacher who expressed an interest to enter special education simply by attending a few seminars (Sahlberg, 2010).¹¹

Instead of the Finnish ensemble of reforms, or some equivalent, the Danes tried to transform the practice of teaching almost exclusively from the bottom-up, relying on the initiative of thoughtful, engaged, experienced teachers: exactly the strategy superiors in a street-level bureaucracy might adopt to allow the innovations of the most committed and thoughtful front-line workers to inform the values of all. The vehicle of these efforts from at least the 1970s until the present (though less energetically in the last decade), was the pilot project,¹² in which groups of motivated teachers undertake to demonstrate to themselves, and eventually to their colleagues and the larger educational community, how the new, or anticipated demands on teaching could actually be met. The goal is to inspire diffusion by emulation. The emphasis was on differentiated teaching and other aspects of child-centric development, rather than on the monitoring of and of student performance that figured importantly in Finland (and has become more prominent in recent school reforms in Denmark.)

Because of the focus on the experience of teacher, rather than what the pupil

¹¹ Teaching thus became much more demanding and selective (in 2008 only one applicant in 10 was admitted to the master of teaching program at the University of Helsinki) even as it became collaborative in new ways, as exemplified in the cooperation between special and general education teachers, and peer review by the SWG. The regime or “treatment” that produces the improvement in school outcomes is an amalgam or fusion of the two; and because the two changes occurred together in Finland, near-natural experiments, such as the Jyväskylä comparison, cannot distinguish the respective contributions of the each. It is, moreover, proving difficult to specify the individual attributes that predict success as a teacher, quite apart from any consideration of the possible contribution of collaboration to individual success. Thus it is possible to identify consistently superior teachers by their on-the-job performance—those capable of helping a class achieve above-average gains one year are likely to do so the next. But there is, surprisingly, little direct connection between high qualifications, such as a degree from a prestigious teachers college or high test scores, and superior teaching. See Robert Gordon, Thomas J. Kane and Douglas O. Staiger, 2006. Still, a rich anecdotal literature suggests subject mastery is an important, perhaps indispensable component of good teaching. (Liping Ma, *Knowing and Teaching Elementary Mathematics*, 1999). Finnish experience suggests that certain types of collaboration may catalyze individual attributes, so that systematically successful teaching depends on (various?) combinations of both.

¹² “ (Krogh-Jespersen, 2005)

learned, and for many other reasons, this bottom-up strategy failed: In the absence of diagnostic tests and systematic review of performance there was simply no way of knowing whether what teachers thought was an improvement in differentiated education actually helped students achieve more. As a result the Danes neither systematically improved the skills of beginning teachers, nor fostered new forms of collaboration between classroom and special education teachers. There is no equivalent of the SWG to monitor the provision of services in each school. As a result, special education has developed haphazardly, in response primarily to local and often idiosyncratic perceptions of need. A recent study (Egelund and Tetler, 2009) finds that rates of referral of students to special education vary greatly among municipalities, with the lowest rates in settings where the actors have informally cobbled together resources for prompt and continuing intervention. The “culture of collaboration” in these more successful settings approximates the relation between special and general education in Finnish schools:

Teacher cooperation in self-organizing teams is a feature of the work culture in schools where formal special-education referrals are infrequent. It seems to be especially significant that there are in these schools teachers with expertise in teaching social skills and literacy, together with knowledge of the general principles of special education. These teachers can function as consultants for their colleagues. (Egelund, 2009)

In the terms under discussion here the upshot is that bottom-up, self-organizing reform—what might be called the natural path of development in street-level bureaucracies—can succeed, but that these successes will likely be haphazard, and depend more on the accidents of local circumstance, than reforms on experimentalist lines.

4. Conclusion

Correctives, I said at the outset, typically stand in need of correction. In lieu of a conclusion, and as a step towards a synthesis of the positions juxtaposed so far, I want to note some of the ways that my insistence on the importance of formal, experimentalist institutions for challenging and revising routines has obscured both important, complementary forays in Piore’s work and the forms of (tacit) sociability on which experimentalist institutions themselves rely.

Thus while the idea of street-level bureaucracy emphasizes its foundation in tacit knowledge, Piore also underscores institutional possibilities for making at least some of that knowledge explicit enough to guide case-by-case decision and reorient institutional goals. In the case of the Dominican labor inspectors, for

instance, he and Shrank (Piore and Schrank, 2008) proposed that individual inspectors keep diaries of their work activities, detailing problems and efforts to solve them, and then circulate their writings to peers as a way of pooling experience and prompting discussion of general problems. In suggesting the explicability of at least some key, previously tacit knowledge they build deliberately on the ambiguities of Wilson's *Varieties of Police Behavior* (Wilson, 1968). On the one hand Wilson says categorically that "the police share with most other public agencies—the schools, foreign ministries, anti-poverty organizations—an inability to assess accurately the effectiveness of their operations," from which it follows that the police chief has "only the most rudimentary knowledge of how well his patrolmen are preventing crime, apprehending criminals, and maintaining order." So tacit knowledge would seem to be the only kind this bureaucracy knows. (Wilson, 1968, pp 57-58) But then Wilson goes on to suggest that learning is nonetheless possible, without explaining how, and that the beat officer's job should be reconfigured, with specialized units (staffed presumably with correspondingly trained experts) taking responsibility for domestic disputes, substance abuse, and so on, leaving generalist officers to focus on, and acquire expertise in "general" order maintenance. Some of Wilson's contemporaries went much further (though with equally scant attention to problems of cognition and organization), proposing that police officers take active part in codifying, and periodically revising their street-level knowledge of the conditions, for example, for applying the laws against gambling (when profits, apart from winnings, regularly accrue to the organizer of the game), and that police departments collaborate with social scientists in developing guidelines for department and front-line behavior (Goldstein, 1967). Three decades later these and related ideas would help inform a vast reform of police organization—community policing—in which headquarters routinely provides beat officers with a wide range of facilities enabling them to consult regularly with the precinct community to identify the patterns and origins of seriously disruptive behavior, integrate this information where relevant with city-wide observations, and devise countermeasures. (Goldstein, 1990, Fung, 2004). Plainly, and as the experience of Finnish special education, and the Nordic path to reform it exemplifies confirm, there are (experimentalist) ways of institutionally explicating key components of the tacit knowledge of street-level bureaucrats, thereby transforming them into hybrids that, to use Piore's term, we can call street-level bureaucracies.¹³ Experience suggests, in other words, that tacit knowledge is a necessary but not sufficient condition for the emergence of street-level bureaucracies.

But there is a broader lesson here. In criticizing the insufficiency of tacit governance mechanism as the steering device of street-level bureaucracies I

¹³ On the continuing tug of traditional ideas of professionalism in even the most thoroughly restructured big-city police departments see (Sklansky, 2011).

have no doubt let it seem as if, in contrast, experimentalist institutions could be both necessary and sufficient to construct an adaptive, non-hierarchical alternative to street-level bureaucracy. The references, developed in other writing, to the US or non-Nordic path to reform, starting from broken bureaucracies rather than professions under strain might be interpreted in this way: as suggesting a world where all knowledge is explicit, or can easily be made so if only the right institutions are in place, and where self interest, rightly understood guides actors to mutually beneficial outcomes. In such a world explicit knowledge would be necessary and sufficient for continuing adaptation.

Again correction is order. This fully transparent world resembles the ideal of rational expectations economics, where actors know their interests precisely, and have full knowledge of the costs and benefits of all the means available for satisfying them. Piore has long been of the party that rejects this view as overlooking the ways in which our wants are defined socially; our knowledge of the world is limited and ambiguous, and relies for clarification on ceaseless dialogue with others, as limited as ourselves; and our pursuit of self interest is often conditioned by bonds of reciprocity and moral commitments entwined with our idea of our own humanity. I am of this party as well. These bonds of sociability, these “human relations,” as they were called in the days of Chester Barnard and the apogee of hierarchy, connect us, or, rather, make us connectable and accessible to each other in ways that allow for reconsideration of our ends, and the means by which we choose to pursue them. This connectability, allowing forms of deliberation not contemplated in the idea of a market, but not in itself constituting anything so definite and coherent as a community, is, as the pragmatists argued, the backdrop and precondition to all our doings and dealings (Ansell, 2011). That most of what passes among us in this way is tacit, and will long remain so, goes almost without saying. Experimentalist institutions hold some of this tacit back and forth up to deliberate review. In that sense they, too, are hybrids of tacit and explicit knowledge; and experimentalist institutions and street-level bureaucracies are, like dictionary entries, only words apart.

The wonder, as this chapter tries to show, is that both work. The hope is that their success, and deeper understanding of the mechanisms behind it, will help warrant the belief that public organizations can learn to act effectively in a period when many hold that to be theoretically and practically impossible.

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